

AUGUST 1935

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by *Murray Leinster*

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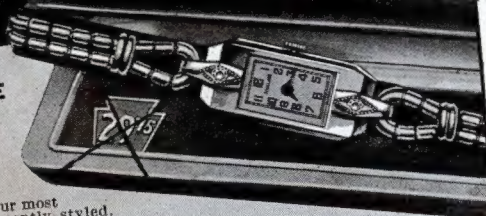
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Number 6

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AUGUST
1936

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29x5.00-19	2.55	1.05	
29x5.00-20	2.55	1.05	
29x5.00-21	2.55	1.05	
29x5.25-19	2.55	1.15	
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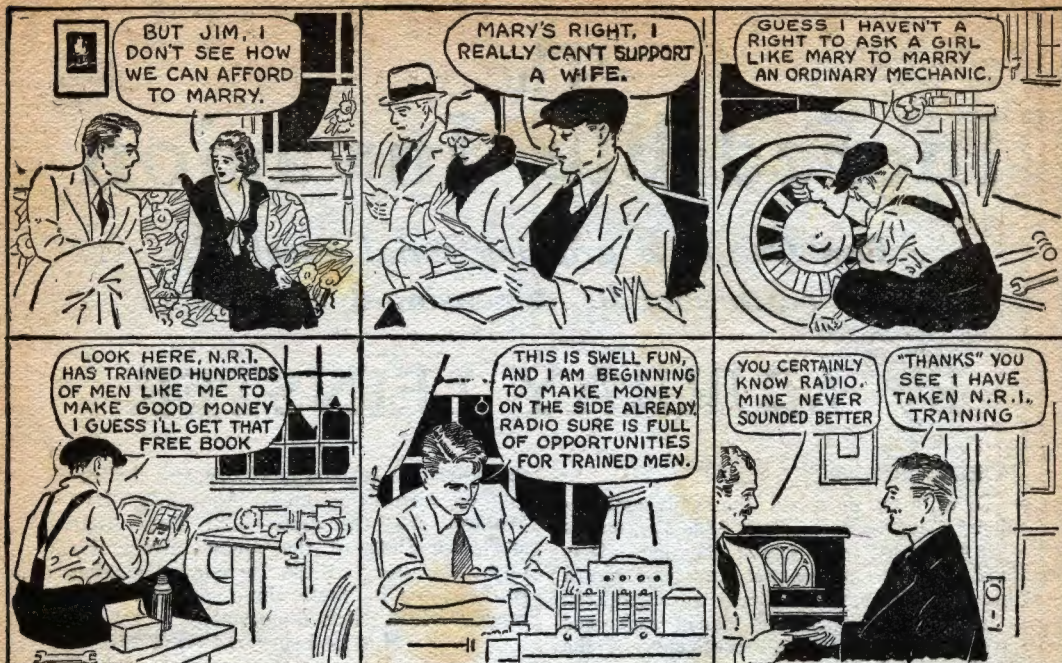
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The Incredible Invasion

*Part One of a gripping serial novel of
the earth and its dimensional secrets.*

by MURRAY LEINSTER

FOREWORD:

To us, after the event, the really extraordinary thing about the Incredible Invasion is that it seemed incredible at the time. It is hard for us to realize that there was ever a time when Straussman's theory was considered a wild guess, when the human race was crowded upon the small continents of the Mother Earth alone, and when only a few thinkers even tentatively debated the possible existence of the other side of here—and usually disappeared shortly after beginning to experiment. It is more difficult still for us to realize that all the innumerable evidences of Straussman's theory were denied or explained away as hallucinations.

But the decade 1930-1940 was backward indeed, compared with to-day. Until very nearly 1940, even television was hardly more than a laboratory toy. Surgical operations were performed under gaseous or injected anesthetics. Newspapers published their illustrations in black and white only, in a hodgepodge of black dots which absolutely omitted all details. It was not then possible to make, even by photography, a stereoscopic picture.

Radios, which carried sound only, were cumbersome instruments requiring batteries so heavy that pocket sets did not exist, and "portable" ones filled small suitcases. Cars were driven by gasoline. Telephonic service—without vision—was carried on by wires. The planes of the period were driven by gasoline as were the cars, and by comparison with the aëros of modern times were mere toys.

Most peculiar of all, though, and inevitably, is the fact that Straussman's theory was ignored except by individual scientists. There was, to be sure, some indefinite teaching concerning other dimensions than three. But no none, apparently, dared reason with the boldness truth requires.

In consequence, when communication with

the other side became inevitable, the civilization of America tottered. And since Steve Waldron was the cause—with Lucy Blair and Fran Dutt—of the course history has taken, the story of the Incredible Invasion is the story of those three, together with Steve's friend, Nick Bannerman.

—Murray Leinster, Oct. 3, 2037.

ON THE FOURTH DAY after Professor Blair's disappearance, Steve Waldron went unhappily to report no progress at all toward finding him. He was to report to the professor's daughter, which made it bad. He was engaged to her, which made it worse. And he was not a detective but a biologist, engaged in research under Professor Hamlin, which made him feel singularly incompetent and helpless in the whole matter.

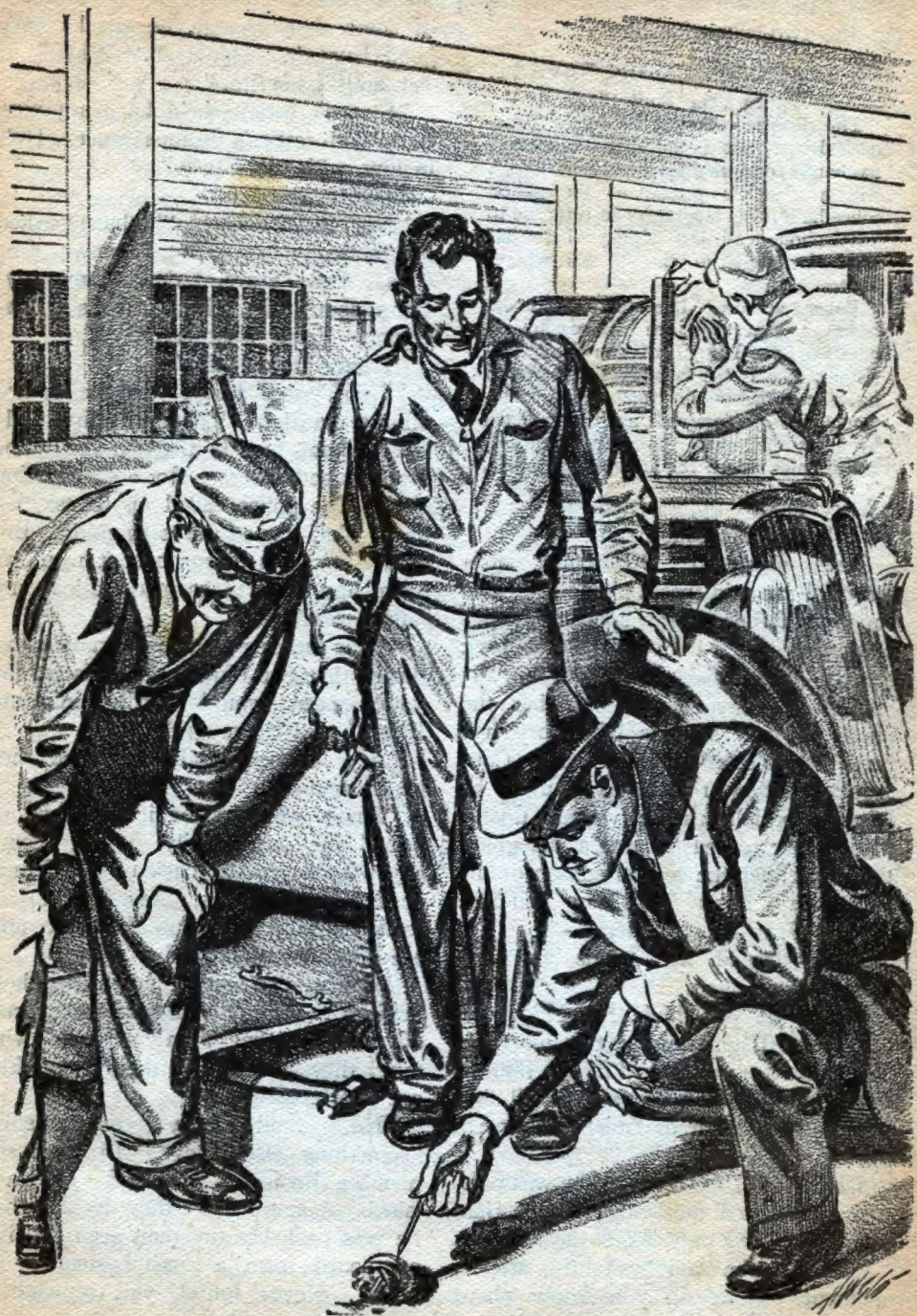
He stopped outside of Lucy's house in a gloomy irresolution. It was just after sunset, and even out here in the Forest Hill section of Newark he could hear the voice of the city. It sounded abstracted and indifferent to his helplessness, and to Lucy's distress.

Lucy was waiting eagerly. Her eyes searched his face; she tried to smile.

"Nothing, Steve?"

"Not a thing," he admitted. "But Fran borrowed my car. He wouldn't tell me what he thought he'd found, but it's a possible explanation of how your father vanished, if not why. You saw to-night's papers?"

She shook her head. Steve took the



So—Fran had put the thing underneath his car—and Steve suddenly believed he knew why.

folded paper from his pocket and pointed out the two-column head:

NO TRACE OF MISSING SAVANT.

Police Fear Foul Play.

The disappearance of Professor Erasmus Blair, noted authority on wave mechanics and mathematical physics, is still a complete puzzle to the police. Since he left his laboratory in response to a telephone call last Friday there has been absolutely no clue to his whereabouts.

Police admitted late this afternoon, however, that they are anxious to re-question Fran Dutt, Professor Blair's assistant, who is the last person known to have seen the missing man. His statements, it is understood, are contradicted by facts the police have lately learned, and a quiet search for him is being made.

Lucy looked up, startled.

"What's this about Fran?"

Steve shrugged. "Probably nonsense. Fran said that a phone call came for your father. Fran spoke to somebody, put on his hat, said he'd be back shortly—and vanished as if into thin air. The police have found out that the phone in your father's laboratory had been disconnected at his request. Consequently, they reason Fran must be lying—especially as they've been unable to find any record of such a call going through either the central station or the switchboard in the laboratory building. And as Fran's a foreigner——"

Lucy clasped her hands and unclasped them again.

"What do you think, Steve?"

"I loaned him my car this morning. When he comes back I'll tell him to get set for a third degree. We'll find your father sooner or later, of course!"

LUCY SAT DOWN. She was pale, and she looked markedly thinner than she had looked only a few days before.

"Steve," she said hesitantly, after a moment, "what do you know about Fran?"

Steve looked blank.

"Why—not much. He was your fa-

ther's assistant, of course—a foreigner of some sort, though he speaks very good English. That's all. Why?"

Lucy bit her lip.

"I—can't believe he'd have anything to do with father's disappearance. He's in love with me, Steve."

Steve growled.

"No," insisted Lucy, "he hasn't asked me to marry him. But I know. One does. And—Steve, I don't know anything about him, either. He's a foreigner. From what country?"

"I never asked him."

"I did," said Lucy, "and he turned off the question. The only thing I do know about him is that he has some brothers and sisters. Not a single thing else! The police called up to ask, today. That started me to thinking. But even if Fran is mysterious, it wouldn't make him want to harm or kidnap my father, would it?"

"Your father's work on Straussman's theory that two objects can exist in the same space would hardly infuriate Fran!" said Steve dryly.

Lucy clasped and unclasped her hands again.

"That's what makes it so—hard to bear," she said jerkily. "Not seeing any possible reason back of it! I'm—getting superstitious, Steve! Do you realize how many people disappear and are never heard of again?"

"Men who're tired of supporting their families? Women who just quietly run off with another man? People who fancy they want to live their lives without interference——"

"No," said Lucy constrainedly, "something else, Steve. Do you remember Professor Milham? He vanished. A month later they decided that he was probably the man seen to dive overboard from a coastal steamer at night. Never found, you remember. And Professor Holt?"

"Auto accident," said Steve, frowning.

"They found a car overboard—his car. But they never found him, Steve. Maybe he did die—that way. But maybe he didn't. I can think of at least three people who've vanished in six months, right in father's line of research. Why?"

"Coincidence," said Steve. "Coincidences happen, Lucy. Your father's all right. Three men in that line have vanished, but there've been plenty of others disappearing, too. There always are!"

"Yes—but more than usual, lately. Really, Steve! There've been people disappearing as if—as if something huge and horrible and invisible had—eaten them!"

"Steady, there!" protested Steve. "This thing is pretty tough, Lucy, but you mustn't go haywire!"

Lucy gulped, and then smiled shakily.

"When your father just—vanishes as if he'd evaporated, without any reason, Steve, and he doesn't try to communicate, and—and you begin to think of other people who've disappeared, too, with no trace even of—their bodies ever being found——"

Steve held both of her hands firmly.

"But we haven't given up yet," he insisted. "We've gotten nowhere so far, I'll admit. But we will——"

The phone rang sharply. Lucy started. Then she quavered. "Every time the phone rings I—hope—— You answer, Steve."

FROWNING, Steve went across the room. He was realizing that Lucy was right about Professor Milham's body never having been recovered, nor Professor Holt's, nor any of half a dozen eminent scientists who presumably had died within the past six months.

As he picked up the receiver he remembered with a sensation of shock that the laboratory fire in which four of America's leading physicists had perished had been so fierce a blaze that

no particle of their bodies had ever been recovered from the ashes.

He put the receiver to his ear. "Hello?"

A voice with the faintest of accents—an unidentifiable accent—came to his ear. It was Fran Dutt. His tone was strained.

"Steve, isn't it?"

"Yes. Where are you, Fran?"

"Not far away. I can't come to Lucy's house, Steve. Police are waiting to arrest me, and I have something I must do—for the professor's sake."

"You've found out something?" asked Steve eagerly. He saw Lucy, across the room, raise her head. Her expression grew tense.

"Something, yes," said the strained voice. "The professor is alive and unharmed. I do not dare say more over the telephone. The thing is too big—and it is incredible. I have found out——"

"What?"

"I do not dare to say. I have been to New York in your car, Steve. And I have found out that you and Lucy are not safe. I am not safe, either, but that does not matter. Something terrible is about to happen! I beg you to believe me in one thing, Steve!"

Steve put his hand over the transmitter and said swiftly to Lucy, "He's found out your father's safe, not harmed."

He said into the transmitter: "Go on, Fran!"

"You must go to New York—you and Lucy. There is a letter at the Mayfair Hotel for Lucy. Take your car and go at once. I am going to stay here. There is danger—terrible danger. You must not get out of your car until you have reached Jersey City at any rate! No matter what happens! You understand?"

"I get it," said Steve reservedly, "but I don't understand."

"Let me talk to Lucy," said Fran's voice desperately. "Please!"

Steve beckoned to her. As he handed her the receiver he said shortly: "He wants us to go somewhere in my car. And he's got it!"

Lucy, very pale, took the telephone. Steve watched as she listened, and as she said steadily: "Yes. . . . I know that, Fran. . . . I think so. . . . Very well. . . . Where is the car? . . . We'll go at once. You're going to stay here?"

She listened again. Steve heard the click of the other receiver. Lucy was even paler than before.

"He knows where father is," she reported quietly. "He says he loves me and something terrible is going to happen. I must be away from here. I promised to go at once. Your car is parked just around the next corner. And we must stay in it, no matter what we see."

"You're going?" demanded Steve.

She nodded.

"I believe him," she said steadily. "He does love me, Steve. He wouldn't let anything happen to harm me. He's going to try to—get father away from where he is."

"I've no gun," said Steve rather grimly. "I like Fran, too, but if you're in danger I want a gun. Your father had one."

"I'll get it," said Lucy composedly. She left the room.

Steve paced up and down, scowling.

Lucy came back. She handed Steve the revolver. She had on a coat and an absurd, small hat. She led the way out of the house and turned confidently to the next corner. She walked fast. They reached the intersection. Steve's car was there, the key in the lock. Steve inspected it suspiciously. He got in and stepped on the starter. It whirled. The engine caught.

"All right. Get in!"

HE let in the clutch. The car sped forward. And now they retraced the way he had come but a little while since—down a wide, still street, between houses with softly shaded lights. Once a frantic braking because of an unlighted bicycle coming out of a side street. Here there were lawns and the houses were large.

Then the mounting piles of apartment houses, as the car headed downtown. The lights were less softly shaded and were more varied in color. The street was less quiet. Then a turn into a long street of shops and crowds and glaring lights. Night had definitely fallen, now, and the crowds were consequently thicker. The car purred quietly in a respectable stream of vehicles.

The roar which was the voice of the city rose serenely to a misty sky. Children played, shrieking to each other. Men and women bought and sold, talked, quarreled and doubtless made love to each other on the sidewalks that slid by the little roadster. Cars purred, chuffed, rattled or clanked thunderously probably upon important errands from one place to another place.

And suddenly the sound of the city changed. Steve did not notice it at first. He was absorbed in his thoughts. But the humming sound which the city sends upward changed its timbre. It had been a smooth, almost a purring sound. But now there came a queer, harsh grumbling, as of a gear grinding in a machine which was out of adjustment. Then there was a shrill, high-pitched noise like distant screaming.

The grumbling grew louder, like a well-oiled motor beginning to seize from overheating. The thin, shrill sound, from a distant whine, became a near-by shriek. The grumbling noises sounded farther apart. They became individual impacts. They were separate, spaced crashes, sometimes thunderously loud.

And then, far ahead along the slant-

ing street they followed, Steve heard an impact which—because he heard it without reëchoings—he identified. It was a car crashing into another. There was a sudden ululation of screamings.

Three blocks away a heavy truck was in the act of turning from a side street into this main thoroughfare. It rumbled around. It did not straighten out on the street. It continued to turn. It went crazily, blindly up on the sidewalk and crashed into a plate-glass front. Then it reeled drunkenly and fell on its side. More cries. People—plainly in view upon the sidewalks—did not run to the spot. They keeled over stiffly, like discarded marionettes, to lie upon the ground.

TWO BLOCKS AWAY a car swerved to the left, careened across the street, and crashed into a lamp post. A trolley car, a block and a half away, suddenly ceased to clang its bell. It came on, gathering speed. Its lights burned brightly. It moved faster and ever faster. It reached and passed the roadster which Steve was now braking madly. He saw the motorman, utterly rigid at his post.

A car behind Steve tried to make a sudden, suicidal U-turn in the middle of the street. The trolley car, without a clang, without faltering, without braking, went on and into the turning automobile. Steve saw the passengers in the street car sitting stiffly in their places. Several of them had turned their heads to gaze behind. Now, at the shock of this collision, two of them toppled over. The rest remained rigid, not turning about at all to see what had happened ahead. And the street car did not turn off its power even after the collision. It continued to push and push the wreckage—

That took only seconds. Half a block ahead, people stared at the progressing tide of the incredible. Then they suddenly stiffened where they

stood. They fell woodenly, stiffly, making no gesture to break the violence of their falls. Others, still nearer, screamed. Somebody began to run. Others fled as insanely. Another crash of a runaway car. As far as the street ran ahead, there was now a vast stillness. Nothing moved anywhere—

Lucy said, tight-lipped: "No chance to turn around, Steve?"

"Not a chance in the world," said Steve grimly. "This is what Fran meant. Sorry."

There was a crash behind him. Something bumped the car violently. He wheeled by sheer instinct. A light closed car was scraping the roadster's fender. Its driver sat rigid in his seat. The other car pushed, and pushed. The driver sat motionless. As the roadster rolled on, the other car swerved and—still bumping Steve's fender—scraped off to one side and went blindly up on the sidewalk. It hit something and swerved, and then came to a crashing stop against a fire plug. Water began to drip down from its radiator. The driver did not stir. He held the wheel in wooden, motionless fingers.

Half a block behind there was a crash. More screams. Ahead there was only silence.

The roadster purred on. Lucy's eyes were wide and frightened. But she moved. A block ahead, a long black limousine came slowly out of an intersecting street, moving at no more than five or six miles an hour. It went deliberately across an intersection, lurched as deliberately up the curbstone, and buried its nose in a drug-store window. There it stopped. No one got out. No one moved anywhere. A dwindling, lessening chaos moved farther and farther away. It must have reached a certain apartment-house district. A shrieking tumult proved it. Then there was silence.

"Wh-what's happened?" demanded

Lucy through chattering teeth. "Is—everybody dead?"

"I don't know," said Steve unsteadily. "Everybody but us, apparently, is dead or something. It was very sudden, for death." He drove on. His hands felt cold. There was sweat on his face and it felt cold, too.

He said abruptly: "Lucy! We mustn't get out of the car! Not under any circumstances! Understand? No matter what we see! This is what Fran meant!"

One block—two—three—silence. The sidewalks were littered with still, stiff, strangely angular shapes. They did not look like dead bodies. They looked like lay figures, toppled over in some elaborately arranged store front. They seemed to have frozen in the act of speech, of gesticulation, of movement or thought. Here and there a solitary figure stood erect, balanced by some freak of chance at the instant that it was frozen into stiffness.

Once, as they passed, such a balanced figure was thrown off its exotic uprightness by the vibration of the car's passing. It was a woman pushing a baby carriage. She fell stiffly, sidewise, dragging the perambulator with her. The sound of her fall seemed incredibly loud, now that the voice of the city was still.

Street lights burned and house windows glowed. As the roadster went weaving in and out of stalled and piled-up traffic, even the show windows downtown gleamed invitingly. But the patrons lay, or leaned, or very absurdly stood in the extraordinary likeness of manikins—motionless, silent, not death-like, because not even lifelike.

And the stiffness had come upon downtown with less warning than upon the suburbs. Here, on Broad Street, there were serried rows of vehicles with purring motors still running. A traffic light had held two blocks of cars in

check at the instant the stiffness fell upon their drivers.

STEVE swung to the left side of the street, and found the way clear. Farther on, he swung to the right again. He turned left. For three blocks there was chaos. Then all was clear once more. But the silence was terrifying.

Only once in all the ride did Steve hear any sound except the noise of his own motor, and once or twice the chattering of Lucy's teeth. That once was a radio, blaring insanely into a town which seemed populated solely by discarded puppets.

Suddenly, the houses thinned. The road was clear ahead. Then there was a sudden tangle of cars on the left-hand side of the road, emptiness on the right. Steve drove on. He jammed down the accelerator, now.

"Steve—Steve," said Lucy with a little gasp, "what—what has happened?"

"I don't know," said Steve grimly. "But I've got a hunch Fran Dutt knows what it is and who's done it, too!"

A traffic light was ahead, underneath a vehicular bridge. A figure stirred under it to wave them on.

Lucy gasped. "We ought to stop and—warn him," she said.

"No," said Steve more grimly still. "We don't get out of the car under any circumstances until we reach Jersey City. I'm going to get you to New York safe!"

The speedometer swept up—thirty-five—forty—fifty miles an hour. Rather odd, they met no traffic coming in the opposite direction. But they heard—and their ears were attuned for such a sound—the city roar ahead of them. Then street lamps reached out toward them. Streets with houses enveloped them. People moved about. They walked, and chattered, and laughed—

Steve braked suddenly.

"It seems like a ghastly bad dream!" he said violently.

He stopped the car and looked back. Far away and far behind, the innumerable glittering lights of Newark sprawled across the dark horizon. From here, it seemed impossible that the city could be a place in which no living thing moved.

Then Lucy gasped again. In one huge, irregularly-shaped section of the distant city the lights had turned reddish. They dimmed. They went out. Another huge section—a third. Then, with methodical deliberation, one part after another of the city on the horizon went dark. It was blotted out.

II.

THE WAY through the tunnel and to the hotel Fran had mentioned seemed like a series of kaleidoscopic flashes: the light-rimmed, yawning mouth of the vehicular tunnel; the glistening tile walls and the hollow roar of the car's motor echoed from all sides; the sudden emergence into wide, night-still streets that seemed cañons between clifflike buildings; then the plunge into traffic, which seemed to begin abruptly at Fourteenth Street; the crawling, spasmodic movement northward to the Mayfair.

They spoke little, in the car. They had come from the impossible to what seemed the incredible. It surely seemed incredible that the people swarming the streets through which they drove should be so indifferent to the colossal tragedy across the Jersey meadows.

They were not indifferent, of course. The news had simply not arrived. Steve and Lucy had outrun all tidings of the catastrophe. And naturally! They had started for New York before the thing began, and Steve had kept on grimly until Lucy was in safety. But as they stopped before the ornate entrance to the Mayfair, the tragedy in Jersey was being discovered.

When Steve jammed on the brakes and rather curtly told the doorman to have the car parked for him, the phone exchanges were growing bewildered. By hundreds, it seemed, indignant telephone users were dialing the operator to protest that they had been cut off from their parties in Newark. By other hundreds, telephone users were waxing sarcastic about the quality of service which could not get a connection just on the other side of the Hudson River. And supervisors were harassedly bedeviling the maintenance department to know what was the matter that no operator in Newark could be reached on any trunk line.

When Steve, at the hotel desk, asked for a letter for Lucy, scared Tube employees were clustered about a train in the Beekman Street terminal. It had come out of Newark and flashed past the Jersey City stations without a pause. The line was clear, so the automatic stops had not checked it. It had come grinding through the underground tunnels, brightly lighted but traveling blindly. Station employees had telephoned affrightedly ahead. Dispatchers hastily conferred and passed the buck.

The train went boring through the tunnel under the river, and a flung switch brought it to a stop just before it reached the Beekman Street platforms. Then the station crew found every human being in it in startlingly lifelike attitudes—but with their flesh iron-hard and no sign of life in them.

The motorman sat at ease, his hand on the controller bar. His hand was not clenched, but the flesh was so hard that they could not loosen it from the handle. Passengers held their newspapers or clung to straps. The newspapers tore when removed. The straps had to be cut for the passengers to be taken out. Doctors, hastily called, pronounced them dead. But their appearance was so lifelike that the doctors reversed themselves. They were alive.

But there was every sign of a *rigor mortis* so intense that they must be dead. But no *rigor mortis* could be so intense, so they must be alive.

They sent the passengers and train crew to hospitals and tried desperately to understand what had happened. Their bewilderment increased when they could get no information, nor even an answer to their calls to Newark for information.

And when Lucy, rather pale, sat down in the lounge of the Mayfair to read the letter Steve handed her, people in East Orange were pulling out strangely stiffened, incredibly hard-bodied human beings from a trolley car that had driven blindly into a motor truck and stopped then only because its trolley jumped its wire.

STEVE had been rather curt when he asked for a letter for Miss Lucy Blair. He grew almost savage when he saw it. The handwriting was not that of Lucy's father. He handed it to her, searching her face.

"It's from Fran!" said Lucy startled. "Why couldn't he tell——"

"Read it!" said Steve. "I've got a hunch!"

He frankly read the note over her shoulder. It was Fran's handwriting all the way through—a queerly crabbed, foreign-looking script.

Dear Lucy:

I am going to ask you to come to New York to get this. It is necessary, because something terrible is to happen to Newark and you must be out of the way. If nothing has happened before you read this, I beg you to stay here for one hour or two, or overnight. You will be safe here. You would not be safe at home.

Your father is alive and well. I assure you of that upon my honor. And I also assure you that if you tell any one but Steve, or if he tells any one that you have had this letter from me and that you escaped the thing that will happen, by my warning—your father will not be harmed. He will be just as safe as be-

fore. But I will be killed. I say this to you also upon my honor.

And therefore I beg of you not to explain to any one how you escaped from Newark. Let it seem an accident—anything you please. But if you say that I caused it, I am a dead man.

Wait, I beg you, until I can come and explain. Fran.

Lucy looked up uncertainly.

"He—he knew what was going to happen."

"It's fairly clear that he knew," said Steve grimly.

"And—he knows where father is now——"

"That's clear, too."

Lucy hesitated unhappily. "Steve," she said in a small voice, "I'm afraid that—that maybe the police were right—maybe he—had something to do with father's disappearance."

"Maybe he did," said Steve, very grimly indeed. "But it's certain that you and I would have disappeared or died or whatever has happened to everybody else in Newark, if it hadn't been for Fran. And I've got something important to see to right away! Wait here!"

He flung away, through the brightly-lighted lounge of the hotel, which was still a place where a certain number of people leisurely read, or wrote, or talked in low voices. He thrust through the revolving doors and spoke urgently to the doorman.

"I had my car parked five minutes ago. Where is it?"

"Back in the garage, sir," said the doorman. "If you wish it brought round, sir——"

"I don't. I want to go where it is. Something important left in it."

"Yes, sir. The garage is in the back, sir, down this way, sir——"

Steve moved quickly. His hunch was strong. Something made him feel the need for haste—for much haste. He went down the narrow service alley—cobble underfoot, blank walls on either

side, the clatter of dishes and the rank and curiously unappetizing smell of food and steam and dishwater from the restaurant kitchen. The feeling of a need for speed grew greater. He ran, his footsteps echoing.

Then came an odor of stale exhaust gas and oil, and the many varied smells of a garage. But there was a smoky reek here, too, and voices babbled excitedly. Steve went tearing into a great vehicle door and smelled the smoke of burning insulation and the pungent odor of hot metal. He saw his car standing alone with thin, blue smoke shimmering out from below it, while attendants played a gasoline extinguisher underneath.

The smoke ceased as he burst into the group.

"What's happened?" he demanded, though his hunch told him he knew. "That's my car! What happened to it?"

"I dunno," said a greasy man in jumpers. "It come in, an' we was puttin' it on the elevator when it begun to smoke. So we turned on the extinguisher."

A clanking rattle. Somebody dragged forward a crawler. The greasy man pulled himself under the car.

His voice, grunting, came out. "Wasn't a fire—no sparks left, anyway. Umph. Here's somethin' still red-hot." His tone changed, as if he were talking exclusively to himself. "Now, what the hell? What was it there for? Never saw anything——"

He pulled himself out and sat up, scratching his head.

"Somethin' attached to the frame," he said querulously. "Looks like it got shorter an' melted down. What was it?"

"I didn't put it there," said Steve, "but I think I know who did. It's no bomb, though. See if you can get it out."

THE MECHANIC slid under again with an assortment of tools. While Steve thought many things, his face growing ever darker, the tools clanked and the man grunted. At last there was a heavy, metallic thump. The crawler rolled out. The mechanic gingerly raked an irregularly shaped ball of still-hot metal into view.

"There y'are. Hm-m-m. I'll put this car where we can keep an eye on it. Now what?"

Steve handed him a bank note, examining the metal ball closely. It was almost a round mass of bronze or something similar. But it had been so hot that the metal had softened and run. Through the gaps in the bronze coating, half fused and now shapeless masses of wires and solid metal showed.

"Put it in water so I can handle it," commanded Steve bitterly. "But I'm damned sure it's melted too badly to tell me how it worked!"

The ball hissed luridly. The mechanic held it under a tap until it was cool enough to handle. Steve wedged it into his topcoat pocket—where it was still uncomfortably warm—and distributed other bank notes. He went back to the hotel lounge. Fran had put the thing underneath his car. And Steve suddenly believed he knew why.

Lucy greeted him, somehow paler than before.

"They're broadcasting—what's happened," she said quietly.

There was a curious stirring in the lobby. People clustered about the desk. The switchboard flickered with innumerable lights. A tiny desk radio gave forth a voice that was almost inaudible but was laboring under intense excitement. It was a desk radio, for the comfort and entertainment of the night clerk after all the normal business should have ceased during the small hours.

"—and the entire city seems to be isolated from the world. From the Empire State Building it appears that all elec-

tricity in Newark has been cut off. There is neither telephone nor telegraphic communication. Radio Station WOR still transmits its carrier wave, but the transmitter—located in the Jersey meadows—reports that it can get no answer to calls to the Newark studio.

"A Tube train has arrived with all its passengers dead—apparently dead before they left Newark. A trolley wreck in East Orange disclosed that a trolley car from Newark was tenanted only by dead bodies, with a dead conductor. Police cars from Jersey City are speeding toward the stricken city and will report by radio. All traffic out of the city has ceased.

"Here's a flash from Jersey City: A police car driving into Newark reported a mass of wrecked motor cars ahead, and immediately afterward stopped transmitting. It does not answer calls. Whatever has happened in Newark has happened suddenly. Efforts are being made through the Amateur Radio League to contact short-wave operators.

"Here's another flash: The Newark airport does not answer calls.

"Here's another flash still: The telephone company reports that all its lines to Newark went dead at the same time. Tests show no trouble with the electric circuits, but every person talking from Newark apparently ceased to answer or dropped dead at the same time—"

A murmurous sound of horror went about the lobby of the hotel. There was something like terror visible on the faces there, which contrasted startlingly with the self-absorbed look on the face of a couple who came through the doors, not having heard of the tragedy.

Steve plunged into a telephone booth. Lucy saw him looking up numbers, dropping in one nickel after another—dialing, dialing, dialing. He could get no answer, no connection. Because, of course, he was trying to tell some authority that he had escaped from Newark, and volunteer information concerning it.

And, of course, every crank in New York, as well as every man with relatives in Newark, was besieging authority with terrified questions which as yet

no man could answer. And also, of course, there were the habitually timorous, agitatedly demanding assurance that whatever had happened to Newark would not now happen to New York.

IN THE END, Steve went to the desk, forcibly attracted the attention of the desk clerk, and secured rooms for Lucy. He went back to her.

"I told the clerk," he said briefly, "that you live in Newark and I won't let you go back because of what's happened. I can't raise anybody who ought to be told what I know. Phone service is swamped. So I'm going in person. You go up to your room and wait. Will you?"

Lucy smiled rather wanly.

"I'm sort of dazed," she confessed. "I—can't believe in what's happened. This afternoon I was frantic about father's disappearance, and now there's this horrible thing, and—Fran—I'm sort of stunned. I think I'll try to straighten out things in my own mind."

"Good!" said Steve, still grimly. "Just one thing. You know Fran, and so do I. I think he kept us from sharing whatever fate has befallen the people in Newark. So I more or less trust him. But, also, I think he had a hand in your father's disappearance. So I distrust him, too. If Fran wants to see you, Lucy—see him downstairs here, where there are plenty of people around. And don't go anywhere with him where you'll be out of sight for an instant—not even in an elevator! And especially, don't leave the hotel!"

"A-all right, Steve," said Lucy.

She smiled gamely at him as the elevator took her upward.

Steve reflected abstractedly that she was being a good sport, holding so tightly to herself in the middle of things that would make most women hysterical. But he couldn't spend his time admiring Lucy just now. New York was

getting news of a sort to produce panics.

He hailed a taxi. The driver was white and scared. The radio inside the cab babbled on:

"Absolutely nothing is known of the nature of the catastrophe which has unquestionably overtaken Newark. On all sides, the suburbs report that it is a city of the dead. Telephone messages indicate that something has wiped out all life in a roughly circular area, bordered——"

The driver turned a white, scared face to Steve.

"That's a damn funny thing, ain't it?"

"Yes," said Steve shortly.

"Wh-what in hell is it? D'you suppose it'll come over here? It's a—a plague, ain't it?"

"No," said Steve more shortly still. "It isn't a plague. It isn't coming to New York. I know. I was in Newark when it happened and I got out."

The taxi driver turned to stare. Shrieking horns warned him of the danger of driving blindly in heavy traffic. He jerked his head about just in time to avoid a smash-up by a miracle.

"M-my Lord!" said the driver a moment later, the near collision forgotten. "Ain't you afraid you—caught it?"

"No!" said Steve. "Look here! I gave you the mayor's address. I've got to see him to tell him what I know. I saw what happened. It's got to be told to somebody in authority. Now, get through the traffic, won't you, before the city goes crazy with fool notions that it's a disease?"

THE DRIVER forthwith became inspired. He considered that an emergency existed, and he acted up to it. He jammed down the accelerator and drove like a crazy man with second sight. Red lights ceased to have any meaning to him. He worked through a forest of moving vehicles. He left behind him a bedlam of indignant hoot-

ings and more than once the shrilling of a traffic officer's whistle.

They reached the twin street lights before the mayor's residence. There were half a dozen cars already before the door. The brakes squealed.

"You'd better wait," said Steve. "They may not believe me and I've got to find somebody who'll listen."

There was an argument with a policeman on guard, insistence, the appearance of an only half-attentive secretary to the mayor, who listened and said soothingly that the mayor was in conference but would send for Steve. Yes. He would send a car and a motor cycle escort. But he was in conference. Mr. Waldron's address was——

He disappeared, and Steve ground his teeth. He went back to the cab.

"They think I'm crazy," he said in forced calm.

Some one came running down the sidewalk, babbling to himself. "I've got to see the mayor. I've got to see the mayor. I've got to see the mayor." His eyes were bright. He explained urgently to the patrolman on guard: "I've got to see the mayor about the trouble in Newark. I did it. I sent spirits over there to make everybody go to sleep, and now they won't wake them up. I want some policemen to arrest the spirits who've stopped obeying me. I've got to see the——"

Steve's taxi drove away as the patrolman resignedly rapped on the sidewalk with his nightstick. Steve's bitterness became alloyed with irony. He had seemed to the mayor's secretary merely the first of the cranks who appear in droves whenever anything either horrible or mysterious occurs. Always they have the full explanation. Always they alone are responsible or can solve or correct the mysterious phenomenon. They appear with offers to drive away comets, or cause rats to drop dead, or balance the city's budget, or select, infallibly, only perfectly honest men for



"Now!" said Steve—and he flung the switch.



The white mouse—which for twelve hours had been an iron-hard seeming corpse—squeaked!

appointive offices. It was not remarkable that Steve had been thought one of their number.

For three hours Steve fought to get a hearing. There was panic everywhere. Newspapers came out with two-hundred-point headlines: **PLAGUE WIPES OUT NEWARK!** Their presses whirled frantically to cope with the demand for copies. All the city was awake. All the streets swarmed with people. Extra after extra emerged and was cried.

There were no fonts of type large enough to furnish headlines for news of such supervoltage. And the news—beyond a certain number of catastrophes to trolleys, one Tube train and a transcontinental bus—was simply that there was no news from Newark—none at all.

What Steve had to tell was not listened to. In any condition of confusion, and especially when fear is involved, the first loud voice alone is listened to. In this case the first voice was the newspapers, which shrieked of a plague wiping out a city in an hour. Therefore, Steve was considered to be a crank, because he claimed to be a biologist and flatly declared that no plague was responsible for the obliteration of Newark.

His statement that he had seen folk stiffen in the streets and that the onset of their affliction had been on the edge of an ever-widening circle, instead of capriciously as a plague would have smitten its victims, simply proved him a liar.

The one place where men seemed inclined to credit him was the health department, where he had gone in despair to give clinical details of the improbable phenomenon which happened to be a fact. He had thought his tale would prove that the stiffening of bodies was not a disease result. But a terror-stricken under-physician chattered that he must be put under strict

quarantine at once, as having come from the stricken city. He pressed a button to summon help to isolate Steve. And Steve, in a passion of frustration, knocked down the white-faced ignoramus, and stalked out.

DOWNSTAIRS, in the cab, he cursed the newspapers for their headlines, which had filled men with terror and thereby closed their minds. And then a really rational thought came to him. He remembered the one newspaperman in New York he really knew—Nick Bannerman, press photographer on the *Messenger*.

He ordered himself driven to the *Messenger* office.

Nick was in a bustling flurry of preparation.

"Hello, Steve," he said happily. "Say, want to be quoted as an authority? You're a biologist. Let me call a guy who'll quote you on the plague in Newark! O. K.?"

"I am an authority," said Steve grimly. "I came out of Newark after it went dead. And it isn't a plague."

"Huh?" Nick stared at him. "Stop kidding! I'm getting ready to go in after pictures—big expedition, everybody in germproof clothes, gas masks, and all the rest. Like going into an operating room."

"You'll never come out," said Steve. "Dammit, listen to me!"

He poured out his story—or part of it. For the first time he realized how lame and unconvincing an account it was, when he had deleted all references to Fran Dutt, who could not be mentioned on account of Lucy's father. Besides, Fran Dutt was Steve's only hope of information. The story was lamed by that fact alone. And since, for the same reason, Steve could not mention the melted-down device in his pocket, his story was unconvincing indeed. But Nick listened to him with open mouth and a queer expression.

"Word of honor?" he asked. At Steve's nod he said slowly, "Then the trip's a suicide party. I'll chuck my job and stay home."

"You're wise," said Steve. Then he added impatiently: "Now get somebody who'll write what I've told you. Men are doing this thing, and men can lick it. But not until they realize it's men and not bacteria they have to fight."

Nick hesitated.

"How much of that story did you hold out?" he asked pointedly. "I know you, Steve. I'm taking your word of honor. You're not looking for publicity. But it's a damned lame story. How much did you leave out of what you told me?"

"The help I had in getting away," said Steve grimly, "and—I see it now—all the evidence that it is men, instead of a disease. But I can't tell that, Nick! Somebody else is involved. I can't!"

"But," said Nick, "without just that the yarn's too thin. It sounds faked and guesswork, too. Mind you, I know it's true! But it sounds faked. And the plague yarn is more plausible and a better story, too. No newspaper in the world will print what you told to me. You'd be laughed at."

"Then what the hell can I do?" demanded Steve savagely. "I can't tell any more!"

NICK ran his hands through his hair.

"Hm-m. If men are pulling this stunt," he said, "they'll be expecting planes to fly overhead and take pictures. Like I expected to, besides the stuff I'd get on foot. You say the germproof clothes won't work?"

"They won't!"

"Then nobody will get pictures till morning, when the planes try it. And if men are pulling the trick, they'll be set to get the planes. Yes?"

"I suppose so."

"So nobody will be able to get pictures, because they'll believe it to be

a plague and it isn't. This is assuming you're right, Steve, and I'm going to gamble that way. Now, if people who do believe it's a plague don't get pictures, well, you tell me a way to get pictures, and then everybody'll believe whatever you say it is, is the truth."

Steve paced up and down the office.

"It's lunatical!" he said angrily. "Lunatical!"

"Sure!" said Nick. "And dammit, anybody else would tell me I was a lunatic to believe that phony-sounding yarn of yours! But I do."

Steve fingered the warm metal ball in his pocket. To display it would convince nobody, explain nothing—it was too thoroughly fused to be informative—and would cause disaster to Fran. He could not use it. He suddenly stopped his pacing and called up Lucy, to reassure himself that she was all right. As he hung up, an inspiration struck him.

"For your damned pictures," he said abruptly, "how about kites? Flying low and trailing cameras? We'd be out of the danger zone, and if they shot down the kites we'd still be all right."

"Swell!" said Nick. "Perfectly swell! And I know a guy who rents 'em for advertising! Here, give me that phone!"

So Nick Bannerman and Steve conducted, themselves, a highly exclusive expedition to the Jersey meadows, at the earliest break of dawn. The expedition Nick had at first intended to accompany reached the edge of Newark and ceased to report back. It was apparently dead. But still Steve felt that Nick was dubious.

They were not alone in their expeditionary ideas. Far away, to the north, sputtering motor cycles pushed cautiously forward on a causeway. High up on the elevated roadway which takes the through traffic from the vehicular tube, there were other expeditions. Motor-boat engines purred or

hummed on the winding channels through the meadows. There were police expeditions, health-department expeditions, newspaper expeditions, mere curiosity expeditions—though these were few—and Federal government expeditions.

From a base in Jersey City or Union City or Bayonne, these parties floated cautiously, or waded cautiously, or drove slowly and very tentatively toward the silent city to the west. Doubtless other hardy explorers moved upon Newark from other directions, also. But out here it was, perhaps, most picturesque.

The newly-risen sun sent its nearly horizontal rays across the world upon Newark's tall buildings. They were aloof. They were silent. No smoke, no steam, no sign of activity appeared anywhere about them. The city loomed dreamlike above the mist. It looked like a fairy city, from a distance and in the early morning.

No word, no sound, no sign of life had come from it during all the dark hours. There was no sign of life now. And parties had essayed to enter it which were protected against contagion, against gas, against every conceivable form of death which might have destroyed half a million people in a moment. Not one party had returned. Not one had given, even by radio, the faintest hint of the cause of its disappearance before it vanished into oblivion.

SUCH EXPEDITIONS had proved that the towers of the city were exactly as inapproachable and exactly as remote as dead cities in the craters of the Moon.

But with the first sun rays yet other attempts of men to explore the city began. Over the cliffs of the Palisades came a roaring, humming sound. A yellow-winged plane hurtled forward. The bottom of its fusilage showed the

square black hole of an aerial camera. It sped forward toward the still city. Aloft, it should be secure against gas or contagion or any other harmful thing.

It swept above the city in a beautiful, sweeping curve. Sunlight glittered upon it. It hummed throatily over the buildings. Nick Bannerman swore.

"It's going all right," he said bitterly, "and I ought to be in it! You scared me off, Steve!"

Steve watched. His lips were tightly pressed together.

"It's still flying the same curve," he said quietly. "Look! It's got to change course now! It's flying low! Too low! It'll hit those buildings!"

The distant dot which was a flying thing did not swerve. Its motor running faultlessly, it swept on in the same graceful, sweeping curve. It did not change course. It went swiftly, smoothly, blindly, into the sheer wall of a man-made cliff. There was a little puff of smoke, perhaps, or dust, a distant flare of flame, then nothing.

There may have been a murmur of horror from those expeditions which fumbled delicately toward the city of the dead. But they were not united. No concerted sound arose. There was a pause, and they went on.

And another plane appeared. This plane flew high—so high that tiny streamers of otherwise invisible mist sometimes partly hid it. It droned like a monster fly, high, high above. Its pictures would not show the detail of those in that other wrecked ship, but it should be safe. It swung above the dead city. Its cameras would be clicking, changing their own plates, clicking again—

It went into a shallow dive. The dive became steeper. It was a power dive, a nose dive, a tail spin. There was not one movement of any control to pull it out. Motor roaring, rotating crazily as it fell, it went spinning

down to destruction in the city below.

"And that," said Steve brittly, "is that. Remember, Nick, that men are causing this! And now let's get to work!"

III.

THEY WORKED for an hour, there in the early-morning sunlight. Steve had not flown kites since his boyhood, and Nick had apparently never flown them at all, but the man who rented them for advertising purposes was an expert. The main drawback was that his idea of the proper way to fly a kite was as nearly overhead as possible, and Steve and Nick wanted the kite to reach as near to the distant city as could be managed.

Time after time they sent the kites up, and every time their owner painstakingly adjusted them to rise as nearly vertical as they could, because that was the way to fly an advertising banner.

In the end Steve lost patience, adjusted the lines himself, and after three false starts sent the first box kite and its camera floating a bare two hundred feet up, and with the end of its string very nearly parallel to the ground. He hooked on a second box kite to hold the string aloft, and then a third.

Nick danced lightly in his excitement, when they came back.

"The damn thing," he babbled, "was nearly over that bunch of stuff that must be a couple hundred cars piled up in a heap. Now let me load this camera up for keeps. We'll send it all the way across the city, and I'll go back and spit in the city editor's eye!"

They sent the camera kite up again, with a cage of white mice dangling beside the camera as an offering to science. They used kite after kite to keep the string off the ground. When Nick, watching through binoculars, announced profanely that the camera and mouse cage were actually above the very heart

of the city, there were nearly two miles of line out and almost a dozen box kites strung along its length.

From the reel on the kite-man's car the thin white cord reached up in a graceful catenary curve, and swept down in another curve more graceful still and up to the next kite, and so on until it became invisible. Then there were merely the motionless little white cubes which were box kites aloft.

Nick pored over the minute hand of his watch with a frenzied impatience.

"Two minutes more," he said feverishly, "one and a half—one—half a minute—finished! Give it fifteen seconds more and reel it in. Hurry up! Speed!"

The kiteman put the reel in gear. The kite line started to come in.

"Let's get going!" babbled Nick. "Reel it in as we go! I've got to get those films to the developing room! I'm going to go crazy till I see if I got it! What a sweep it'll be!"

He was beside himself—with anxiety about the camera and with the reporter's craving for speed. The camera, of course, was one such as a newspaperman uses to cover fires, floods, spectacular arrivals, and catastrophes from the air. It was really a mapping camera, changing its own plates either after each exposure or at predetermined intervals, with the exposure of each plate automatically arranged for. It had been changing and exposing its own plates over the dead city. The white mice were for scientific experiment, if they became stiff and iron-hard like human beings.

And Steve could see reason for speed. He started the kite-reel truck and went swiftly toward Jersey City, with the reel hauling in kites and camera as the truck towed them. Steve stopped where wires crossed the road between two poles at the very edge of the town.

There he waited, the motor idling,

until Nick caught the camera in his arms and cried zestfully: "Home, James, and don't spare the horses! Step on it, Steve!"

Steve obeyed, while the kite man stowed his kites. Presently, at the necessary stop before entering the vehicular tunnel, the kite man took over the wheel. Nick crooned unmusically over the bulky camera.

"We got some action," said the kite man proudly. "Those other fellows are still stuck."

"Stuck, are they?" said Steve sharply. "Stuck?"

"I saw a couple cars that were headin' for Newark go off the road in the ditch," the kite man explained. "The fellows that were next to us gave up, seemingly. When I stowed the kites they were all lyin' down. Even the motor cycles wasn't goin' on. They were lyin' down, too. They were stuck, weren't they?"

Steve's jaw clamped tight. Nick stared, wide-eyed.

"Steve! My Lord, Steve! That doesn't mean——"

"It very probably does," said Steve grimly. "They got the planes. They saw that we got pictures with kites. They didn't want us to take them away. So they enlarged the dead area—whatever causes it!"

NICK SWORE in an awed and shaken voice. The truck swooped up out of the underwater tunnel. Steve reached back and took the little cage of white mice that had come back with the camera. He had barely glanced at them before. That they would return stark and stiff and still had seemed a foregone conclusion. Now he opened the cage and poked them experimentally. He had been right.

"I need a biological laboratory," he said abstractedly, "so I can work on these mice. I want to find out what

happened to them. Then I'll know what happened to the people in Newark. And maybe I'll be able to guess at a protection from it."

"If our pictures are good," said Nick, "anything you say will be taken as gospel."

"All right." Steve seemed indifferent. Actually, he was absorbed in planning the work, the tests he planned to carry out. The small furry bodies were startlingly lifelike. "I'm going up to see Professor Jamison. He's done a lot of work on the blood stream. He isolated a new intermediate product in clotting. He'll have everything I need, and he'll work with me."

"If only these pictures turn out!" said Nick yearningly. "Steve, if they turn out, you'll talk?"

"Surely. I say! Let me out here! I'll get a taxi and speed up to Jamison's laboratory. It's at Columbia."

The truck swerved to the curb. Steve climbed out, carrying the cage of white mice, and then hailed a taxi. He was gone into the thick of the traffic before Nick began to swear at his own failure to arrange a definite means of reaching him. But even that oversight could not keep Nick Bannerman's attention long. He was on fire with impatience to get into a dark room with his plates.

Steve examined the mice, his specimens, on the way uptown in the cab. The news accounts of this strange condition had been markedly accurate. The flesh of the little creatures was hard—harder than *rigor mortis* would account for—harder than any form of catalepsy could produce. Harder—it seemed to Steve—than even frozen flesh would be—which was to say harder than ice.

But even with the evidence before him, Steve could not quite believe that. Yet he did notice that the normally soft, sleek fur of the little animals had a queer feel. The long whiskers re-

sisted bending to a surprising degree. They seemed almost like wires! He could prick his finger with them! But queerest of all was the utterly lifelike look of the mice. They did not look dead. They did not feel alive. They seemed like consummately carved images of mice, perfect past the possibilities of art.

Then they reached the cut-stone walls and somber buildings of Columbia. Steve went directly to Professor Jamison's laboratory. He carried the stiffened mice in their cage. He knocked on the door, planning absorbedly as he knocked.

THE DOOR OPENED. Not Professor Jamison, but a young, unobtrusively foreign young man looked inquiringly at Steve. He wore a laboratory apron, work-stained and torn. The indefinable smell of a biological laboratory struck Steve's nostrils: alcohol, formaldehyde, chemicals, guinea pigs and——

"Where's Professor Jamison?" asked Steve urgently. "I'm Steve Waldron, doing some research work with Hamlin, in Newark. You know what's happened over there! I've got some specimens from Newark, and I've got to work on them and find out what's what. Where's Professor Jamison?"

The young man smiled.

"He is not in just at present," he said cordially. The barest trace of a somehow familiar accent marked his speech. "He will be back later. But have you specimens from Newark? That is news! It is an opportunity! How did you manage to get them? Come in! You surely need no better introduction than that! The professor——"

He opened the door wide. Steve stepped in. He flung off his coat.

"First thing," said Steve feverishly, "is to take a look at the cells of the

various tissues and see what causes that rigor. I saw the damned thing happen in Newark. It's not a plague. It might have been a gas, but I don't believe it. But we can check for extra substances—especially colloids—in the blood stream——"

He stopped short, staring. The young man had continued to smile, and Steve suddenly noted with a sense of extreme shock that he was subtly foreign. His hair was jet-black and absolutely straight. His skin was faintly pigmented—but most of the white races are pigmented more or less. His smile was pleasant, but his cheek bones projected, and his lips were just a trifle thin, and the shape of his head was most extraordinary.

Steve stared at him, startled out of even his absorption in the technical problem at hand. This young man was, to be sure, the born pattern of a laboratory assistant or an unusually gifted student permitted to help in research. In a crowd, he would pass unnoticed. But an uncanny sense of familiarity came to Steve. The smile was familiar. The combination of head form and jet-black hair and slightly noticeable cheek bones associated him with a type—a racial type which was unobtrusive but distinctive.

"I know," said Steve, staring with all his eyes, "I know a man who looks a great deal like you. I wonder——"

The young man's smile widened just a trifle.

"You have come from Newark, you say. I think your story will be most interesting. Did you, in Newark, see anything like this?"

He opened a drawer in a laboratory table. He reached in his hand. And suspicion struck Steve with a sudden violence. The young man turned, with a queer, tubelike thing in his hand which looked partly like a pistol and partly like almost anything else.

"Did you ever see anything——"

His eyes were suddenly intent—and deadly. He jerked the thing—it was a weapon—up to cover Steve. And Steve struck like a madman. He had never struck so swift a blow before. It went home to the young man's jaw. The pistollike object fell from his grasp as he went limp on his feet and crashed soggly to the floor.

"My Lord!" said Steve, stupefied. "He—Fran Dutt—— He could be Fran's brother!"

He stared down at the man he'd struck. There was a sudden crackling noise, the smell of hot metal. The pistollike thing on the floor gave off a thin curl of pale-blue smoke. It grew hotter. It glowed a dull-red, then a cherry-red on the concrete floor of the laboratory. Its outer shell sagged and melted in spots, and the fused interior partly ran out to make a puddle of melted metal, and partly collapsed into an unfathomable shapelessness, like the bronze ball underneath Steve's car.

And then some instinct made Steve look in the direction of the cages in which guinea pigs lived and moved. In one cage they did not move; but in another they were motionless, stiffened—cataleptic! The pistollike thing had pointed at that second cage. Steve opened the cage and put his hand in. The flesh of the guinea pigs was hard—harder than *rigor mortis* would account for——

HE LEFT the young man on the floor and went desperately in quest of a telephone. He called the office of the *Messenger* and demanded Nick.

Nick answered the phone with the manner of one singing songs of triumph.

Steve curtly told him exactly what had happened, demanding that Nick send police and reporters—the police to arrest Professor Jamison's assistant and sweat him for information about the

plague, the reporters to describe the pistol and the unquestionable truth that it had produced every symptom of the Newark plague in guinea pigs. It would change the whole attitude of men toward that plague. Nick listened, but with less than absorption.

"I got the pictures, Stève!" he said exuberantly. "That camera got clear snaps of the streets! Cars smashed up! People lying on the pavements, propped up in doorways, frozen stiff in their cars—— I got the pictures! I'll send somebody up to the laboratory. A rewrite man did the yarn as you gave it to me. This'll help for a follow-up until we can get more."

"Send a cop or a lot of them," Steve told him grimly. "When my young foreign friend comes to, he should be made to talk!"

"O. K., guy!" Nick was much too pleased with himself to be wholly rational. He added suddenly: "Say! Somebody—a Miss Lucy Blair—has been trying to get hold of you. She asked for me, told me to tell you Fran's come, whatever that means. How'd she know I knew you, Steve? She's at the Mayfair. That your hotel?"

Steve barked into the transmitter.

"Yes! Get those cops to come grab that young fool I slugged! Tell 'em to slap him in jail and hold him! I've got to get to Lucy in a hurry!"

Hatless, he plunged out of the phone booth and out upon the street. He caught a cruising taxi, and, by the use of cash, persuaded the driver of his need for extreme haste.

He got it. Had he been less worried about Lucy, he might have grown gray-haired on his own account on that ride. But his distrust of Fran was more intense than ever since a man with Fran's own racial characteristics had tried to use a strange weapon producing exactly the strange catalepsy which had wiped out Newark. And with Fran



*And then some instinct made him look in the direction
of the cages—*

where Lucy was, Steve knew anxiety of the most nerve-racking sort.

IT WAS NEEDLESS—partly. He went racing through the revolving doors of the Mayfair. He saw Lucy, pale but composed, talking quietly to Fran on a sofa at one side of the lobby. Sheer relief came into her eyes as she saw Steve. Fran looked sick and wretched.

"Hello, Fran," said Steve grimly. "Let's go in the lounge and talk. I think we'd better."

He led the way. It was still fairly early in the morning and there were few people about. Steve led the way to a group of chairs by a window. He seated Lucy. Fran shrugged and sat down. Steve took a chair himself.

"What're the developments, Fran?" he asked quietly. "You were quite right. It was wise for Lucy to get out of Newark. Something terrible did happen there. Now what?"

"He's been begging me to go out West somewhere," said Lucy, very pale. "He's offered to lend me the money."

Steve's eyes narrowed.

"Why, Fran? Is your crowd planning to do the same thing for New York?"

"Why do you say my crowd, Steve?" Fran's voice was strained.

Steve noticed afresh that he had the same faint, almost unnoticeable accent as Professor Jamison's laboratory assistant.

"I think I've proved that I wish Lucy well—and you, too. What's this talk about my 'crowd'?" Fran continued.

"You wish Lucy well, yes. Me—I'm not so sure. And by your crowd, I mean the men who've—done whatever's been done to the people in Newark."

Fran Dutt said harshly: "I resent that, Steve! You've no reason to believe men caused that catastrophe—"

"Don't be a fool, Fran!" Steve's

eyes glowed. "I'll be willing to bet that about your person you've got a—well—we'll call it a pistol. It's something like a pistol; but it doesn't shoot bullets. If you drop it to the floor it will heat up and melt itself, so nobody can figure out what it was meant to do, or how. But I know!"

Fran had been pale. He went paler yet. He went livid. "Where'd you hear about such things?"

"Where I've just come from. I knocked a man cold who tried to turn such a pistol on me. It did hit some guinea pigs, and they're the best-looking dead guinea pigs you ever saw—like the people in Newark. You see, I do have reason to say men did that!"

Fran Dutt hesitated in an agony of indecision. He looked at Lucy. Then he said desperately: "All right, I'll admit it! To you! I've got such a pistol in my pocket. I'll use it if I have to. That's warning! But I point out that I did get the two of you out of Newark! Didn't I? And I'm going to keep on trying to see that Lucy's safe. But if you fight me, Steve, I can't! My life's in your hands, but I'm the only man who can help Lucy and—and her father."

Steve said between his teeth, "Are you asking a price?"

Fran flushed hotly and then went deathly pale again. "I am not! For Lucy I will do anything that I can! I love her, and she knows it. I am risking my life and more than my life in what I have said to you here and now! You cannot understand what I am risking! But I would be a traitor to my homeland if I did more than try to protect Lucy. What I did for you, Steve, was incidental. It was necessary that some one take Lucy away. That is why I looked out for you. You were my friend, but my homeland—"

"You concede that men have destroyed Newark? Your countrymen?"

What is this, Fran? A war? An invasion?"

Fran hesitated, and said helplessly: "You would not understand, and I would not tell you anyhow."

Steve's eyes were extremely intent. "Tell me this! You were working with Lucy's father. He had an idea that Straussman was nearer right than most people believe—two objects in the same space at the same time." Steve nodded as Fran's eyes widened. "Yes! Straussman! Your compatriots are working from where Straussman left off?"

"That is nonsense, Steve!" Fran's tone was convincing enough, but his eyes were almost frightened.

"Very well. Professor Jamison had an assistant. He looked like you, Fran. Was he your countryman?"

"How could I tell, Steve? I do not know him!"

"Professor Jamison has disappeared, hasn't he?"

"Yes—— How do I know?"

"You do know, Fran. He has disappeared. His assistant is your countryman. He was a spy; wasn't he? And aren't you a spy for your country in a war that my country doesn't yet know exists?"

Fran's hand went into his coat pocket. He had gone paler and yet more pale at each question. Now he said bitterly: "You do want Lucy to hate me, don't you? All right, it's true! I am a spy! My country has invaded yours. But tell your countrymen so! They'll call you a lunatic!"

"I have been called a lunatic," said Steve. "I'm used to it."

"I hate it!" said Fran fiercely. "There was no need for this war. There are many of us who do not believe our leaders are right in this thing. Many of us hate our leaders. We would be glad to overthrow them, to wipe

them out utterly. But what can we do? I was sent through to be a spy. My family is in my homeland. If I fail, if I do anything against our leaders' plans, my parents, my brothers, my sisters——"

"I see," said Steve. "You're saying there's a revolt brewing in your country. That's probably why it's starting a war against mine!"

"Perhaps," said Fran desperately. "But——"

A NEWSBOY shouted outside the hotel. "Pictures from Newark! Pictures from Newark! Extra! Pictures from Newark! Dead bodies in the streets! Men done it! It ain't a plague! Extra!"

Fran Dutt started up.

Steve called a bell boy and sent him for a paper.

"It'll be Nick Bannerman's work," he said curtly. "We got those pictures not much over an hour ago."

The bell boy came back, panting with his haste.

Steve took the paper.

"I want to know how straight Nick got the story," he said grimly, "and how much people will believe."

He ran his eyes down the account, while Fran Dutt looked helplessly at Lucy.

Then Steve exclaimed angrily, "The fool! He's hashed together a lot of nonsense, and then put in:

"Steven Waldron, through whose assistance these exclusive photos were secured, said in his rooms at the Mayfair Hotel, 'That's all I can tell you now. I've proved that men are responsible for the destruction of Newark. I'm going to get some rest, and then start to lick them!'"

Steve ground his teeth. "The fool! Whoever wrote that story didn't believe a damned bit of it, and wrote none at

all! They've told nothing! Nothing! Nothing!"

But Fran Dutt said harshly: "Fool? You're a fool, Steve! Get Lucy away from here! At once! This hotel was mentioned as your headquarters, and I'm not the only spy in New York!"

Steve glanced at Fran Dutt's chalk-white face. Then he stood up, took Lucy's arm, and led her swiftly out the front revolving door. A taxi discharged a passenger.

Steve thrust Lucy into it and snapped: "Drive on! In a hurry! Speed!"

The taxi lurched. In half a block there was a traffic jam. In a block there was a red light—two blocks, three, four—

Then, behind them, there was a sudden crashing sound. There were screamings. There were heavy, sodden bumps mingled with other screams, and the shattering of plate glass, the roaring of automobile horns, the shrilling of police whistles.

Steve looked back and saw. He said grimly: "Driver, the stuff that hit New-ark is working back there. You'd better step on the accelerator!"

IV.

IT WAS NOT HARD to find out, once they'd persuaded the panic-stricken driver to stop away uptown, just what had happened about the Mayfair Hotel. For two blocks in every direction every street, every building, and every room was in the condition of the city of marionettes across the Jersey meadows. Human beings, frozen instantly in the position and the gesture of the moment, lay on the ground, or leaned drunkenly against some object which had arrested their fall.

Motor cars, trucks, and surface cars had gone blindly ahead when their

drivers stiffened into the semblance of waxworks. They had crashed into each other. They had rolled across sidewalks and into plate-glass windows or into areaways. And along the ways leading out of the affected district, juggernaut vehicles had come with seeming corpses at their wheels. These last monsters caused the screamings Steve and Lucy had heard.

They heard the explanation in a tiny restaurant into which Steve had taken her, in part for breakfast and in part because of the over-resonant voice of an announcer to be heard within it. They listened to the report of the "plague spot" about the Mayfair Hotel. Only after it was ended did a rather pretty waitress come to wait on them.

She made no apology for the delay. Business was not being carried on as usual, this morning. Even the radios for once became noncommercial. News bulletins came through with such rapidity that no possible fifteen-minute period could be completed without interruption for a news flash. So the broadcasters flung out the latest news and then played records until it was time for more news.

Steve ordered breakfast for Lucy and himself.

"We've got a breathing space," he said somberly, when the waitress had gone to the kitchen with their order. "But we've got to think what to do. That plague spot around the Mayfair was designed to get us—me particularly. Heaven knows that newspaper didn't describe me as knowing much, but Fran's compatriots evidently thought even that too much. I'm going to call Nick at the *Messenger*."

He rose from the table and closeted himself in the little booth by the cashier's desk. Lucy sat still, waiting. Things were moving fast! The disappearance of her father and the anxi-

ety and heartache attendant upon it; the misery of Fran Dutt, which at first had seemed grief like her own, and was now all too plausibly shame that he had been the person to cause her that grief. But he did say that her father was alive and well, and he had kept her and Steve from being the victims of whatever had wiped out Newark.

That catastrophe, itself, was too vast to be real. Lucy simply could not make herself believe that nearly every human being she knew was a stiffened, iron-hard manikin, toppled in some grotesque attitude of the moment among half a million other such manikins in a silent city. The idea was too big to be grasped and too horrible to be believed. It was too grotesque to be accepted as anything but a dream.

THE MUSIC of the radio cut off abruptly. An announcer spoke:

"The authorities announce that it seems most probable that the outbreak of the plague in a sixteen-block area in Manhattan, an hour ago, is due to the bringing of the plague germs from Newark by a newspaper photographer and a Mr. Steven Waldron, who claimed to have escaped the onset of the plague there. The new plague area has been surrounded by a military cordon.

"Steve Waldron, it is assumed, was involved in the outbreak, having been in the Mayfair at the time the plague struck. The newspaper photographer has been isolated, and every precaution has been taken against further outbreaks."

Steve came out of the phone booth, his brows dark. He sat down opposite Lucy. The waitress served them.

When she moved away, Steve said shortly: "This world is run by lunatics! Nick was arrested as a possible plague carrier and was ordered, practically at the point of a gun, to join another expedition to make an aerial survey of Newark by means of kites. He having gotten pictures before, they think he can do it again. And the men

who're taking him know they run a chance, anyhow. He's gone with them."

The radio boomed:

"Doctors are not yet able to understand the condition of the bodies recovered from the Tube train last night. They show absolutely no sign of life, but neither is there the faintest proof that they are dead. Physicians refuse to conduct autopsies in the absence of clear proof that the victims are actually dead, yet admit that they have no hope that life remains. So far the bodies have shown no sign of changes indicating death. Bacteriological examination of such body fluids as have been obtained are wholly negative."

Steve stirred impatiently.

"But why don't they use the animals I got for them? It would be like the police, going after Jamison's assistant, to miss those guinea pigs and white mice altogether! The doctors could autopsize them, anyhow! There's one thing I can do that I won't be cursed for, anyhow! I'm going to telephone again."

He pushed back his chair and went to the booth for the second time. Lucy, eating bacon and eggs and mildly amazed that she could eat at all, could see his frowning concentration as he dialed. Then he asked for some one, waited, and talked crisply.

An instant later he looked incredulous, then furious. He barked at the transmitter, and the tone of his voice came out into the small restaurant though no word could be distinguished. He was raging. He snapped a last, apparently blistering phrase, hung up, and came out with his eyes blazing.

"Sorry, Lucy," he said in a voice he kept calm by a tremendous effort, "we'll have to go on. I won't have time to eat my breakfast. You'd better leave the rest of yours. Come along!"

He left on the table a sum which would pay for the food twice over, and ushered Lucy swiftly out into the street.

"The fools!" he raged, the instant the door had closed behind them. "I called the health department to tell them there were some small animals they could conduct autopsies on in Professor Jamison's laboratory. And the fool at the phone ordered me to stay where I was and keep myself isolated until a quarantine car could come for me. He added that the phone call would be traced instantly, so I couldn't get away."

"But—Steve——"

"Fran Dutt," said Steve furiously, "wants you to go out West. Don't you see what that implies? He wants you safe! You won't be safe unless you go West. Do you think I'm going to leave you here after a hint like that? Dammit, they'd quarantine you, too, because you've been with me—and we'd have a plague spot appearing to include us both! It happened this morning, didn't it?"

He hailed a taxi.

"But—where are we going now?" asked Lucy uneasily, getting into the taxi.

"That taxi that took us from the Mayfair was headed uptown. And the driver was scared, you remember! We're about six blocks from Columbia now. I'm going to get some of those stiffened animals before the police get there. They'd be just fools enough to burn them as possible centers of contagion! And then I'm going to go where I can work on them, find out what Fran Dutt's friends did to them, and figure out a way to prevent it. Then I'm going to take some men into Newark and fight! Fran Dutt said it was a war. They've done all the fighting so far. It's time we Americans did a little scrapping!"

In less than an hour, though, Americans were fighting. But they were fighting among themselves. Steve had called the health department not later

than a quarter past nine. He left the little restaurant immediately. In exactly forty minutes the radios of New York announced the appearance of a second plague spot in Manhattan. It centered six blocks from Columbia University—at the restaurant. Ten minutes later a third plague spot appeared on the Columbia campus.

STEVE AND LUCY heard the commissioner of police when he took the air a little later. He informed the public that Steve had telephoned from one plague spot just before the plague struck it, and directed the police to go to the other just before it, too, manifested itself as a place where all human beings died. Then he referred to Steve's presence at the Mayfair Hotel, which instantly thereafter was smitten with the plague.

The commissioner went on:

"We can only assume that this man is a plague carrier, himself immune to the strange disease he spreads. His last phone call was plainly motivated by a news broadcast of a few minutes before, so we are sure he listens to the radio.

"Therefore, I make a personal appeal to Mr. Waldron to surrender himself, to permit himself to be isolated, so that uncounted thousands of his fellowmen may live out unharmed the lives that are so precious to them; that women and little children——"

And so on. It was an impressive appeal, but it proved that Steve was considered at least a lunatic and that the belief in a plague was so firmly rooted that nothing could overthrow it. The one edition of the *Messenger* which had quoted Steve on the human origin of the Newark disaster had been supplanted by others which made no further reference to that theory. So the commissioner made one mistake in showing Steve that he would have no help and no chance to uncover the real cause of the disaster.

And the second mistake was that it let the public know that further outbreaks of the plague might happen anywhere, and at any time.

The first mistake set Steve grimly at the task of getting out of New York to some spot where he might work on his recovered specimens without ill-advised interference. The second mistake made panics.

Not all of New York went mad, of course. But the hysterical and the ill-advised tried to bolt from the city. They fought for places on trains, battled for room on the river steamers, and thronged the streets offering vast sums—at first—to any motorist who would take them out of New York. But there were many who had no money. They begged rides. Then they demanded rides.

There were riots in which panic-stricken fools swarmed upon cars stopped at traffic lights, crowded them crazily, and insanely demanded transportation out of the danger area. A driver was dragged from his car that some one more fearful than himself might take his place.

People thought only of themselves.

The elevated and subway stations were mobbed. The trains taking the longest routes were jammed far past even the normally preposterous crowding. And then battles began, with folk on the platforms fighting to drag out those within the trains, so there would be room for them inside. The subway systems in particular were paralyzed, because, of course, the safety systems would not let the trains start until all the doors were closed.

There were gruesome happenings in the subway stations.

Steve saw the beginning of the panic, even far uptown. First, there were madly speeding cars, loaded far past capacity—with passengers on the running boards, the mud guards, hoods,

and even the roofs. Those passengers shouted for road room.

Elevated trains were moving tumults. Motor trucks drove by, with seeming lunatics at their wheels, so crowded that it was not uncommon for a figure to be jolted from its hold. Even horse-drawn drays rattled northward, the horses lashed furiously by drivers who assuredly had not taken the animals from the stables that morning.

In such a river of traffic, driven by senseless panic, Steve's and Lucy's actual and pressing necessity seemed impossible of achievement. Steve grimly watched the flood of vehicles go by.

"No safety in that sort of escape," he said coldly. "We'll have to wait till the worst of it is over."

THEN some one touched his arm. A man in a cap nodded to him.

"You lookin' for a way to get outa town?" he asked quietly.

"Yes," said Steve as quietly. "But not like that!"

"Right," said the man with the cap. "You look able-bodied. Nobody but you an' her?"

"Nobody else," agreed Steve.

"I got a car," said the man, "an' I got some kids. Those lunatics would drag the kids out to make room for them. Another fella an' me, we're figurin' on makin' a break. With people goin' crazy like this, there's goin' to be trouble presently. My wife can drive. I'll make room for you two if you help in any scrappin' we have to do. Three of us with ax handles oughta keep the runnin' boards clear."

"I'm on," said Steve.

It worked out well enough. The car was parked in a back yard. Four children, three women, and three men cramped themselves into a five-passenger touring car of decidedly antiquated

pattern. The children crouched down on the floor. Steve and one other man perched themselves on the folded-back top. The owner of the car sat on the back of the front seat. His red-headed wife looked up at him; he nodded; she drove out into the street. The three men had shed their coats and waited, bare-headed and grim, with ax handles frankly ready for trouble.

They got out of town. The exodus had been coolly if hurriedly arranged. They were in the thick of the traffic just once, when they had to cross a bridge. There they were crowded toward the side of the open way and figures jumped for the running board, babbling. The ax handles came instantly into play, without argument or remorse.

For ten minutes it was nearly a continuous battle. Then the red-headed woman managed to get farther out into the middle of the stream. A little later she managed to break out of it onto a side road. Her husband consulted road maps, and for an hour or more they threaded narrow country lanes. In all that time they saw no more than a dozen other carloads of refugees. The great mob of the panic-stricken stayed on the main highways, fleeing senselessly from a plague amid all the conditions which produce contagion.

They stopped. The owner of the car said satisfiedly: "Well, we made it! Where you want to go, fella? We're headin' up for Vermont. The wife's got a family up there, an' we'll visit a while. My pal's goin' near all the way. What's on your mind?"

"I'm hunting for the nearest town with a biological laboratory in it," said Steve. "What's the nearest town, and which way is it?"

More consultation of the road map. White Plains was three miles off.

"Thanks," said Steve. "That'll do, I think."

He started to get out of the car.

"We'll take you most of the way, anyhow," said the owner of the car. "Set still. I like the way you swing an ax handle!"

The embattled car took them all the way to White Plains. There they saw the thick, clotted stream of fugitives passing through. There their benefactor spoke to his red-headed wife; she braked, and instantly turned the car in readiness to speed away. Steve and Lucy got out. There were grins. A child piped, "G'by!"

The car dwindled on the way to Vermont.

"NOW," said Steve, "to find a laboratory. I've been doing some thinking, though. I believe I can get somewhere with just a decently equipped doctor's outfit. We'll see."

He found what he needed. He frankly explained who he was and that he had specimens from Newark and had to do some autopsies in a hurry.

The leading family physician of White Plains heard him out. Then he led Steve into his office. He was not a specialist, but to keep the confidence of his patients a family doctor nowadays can frequently do a certain amount of X-ray work, bake out a rheumatic pain, or perform a minor operation. And a family physician knows—none better—the importance of exact information.

"I've been disbelieving that it was a plague," said the doctor dryly. "Germs don't work that way! But I haven't even a guess as to what it is. So go ahead! If there's anything else you need, ask for it."

He went out.

Steve set to work. It was then about noon. At two o'clock he had found absolutely no faintest clue to the cause of the death of three mice, which he had dissected with infinite care. Their flesh was hard—harder than ice. More,

each and every internal organ was hard, too—which was hardly an expected discovery. There was no discernible abnormality in any organ, muscle, or tissue. They were hardened, but that was all.

No ordinary chemical process could have produced that hardening—not while the normal amount of fluid remained in the tissues. The blood seemed thickened, but it had undergone no change in constitution or color. It had neither clotted nor separated. Its corpuscles were normal in appearance and number.

At four o'clock Steve had found no anomalous chemical in the tiny bodies. The doctor had bought living white mice at a pet store for him. Blood from the stiffened, frozen mice, injected into the others, produced absolutely no effect. Which, of course, proved the absence of poison, but would not be proof of the absence of bacteria until an incubation period was past.

A culture medium, made from the hardened tissues, was apparently un-nutrient. Bacteria simply acted as if the tissues were no longer organic material. But there was no chemical change that could be found, and only the hardness as a physical change to distinguish the tissues of these stiffened, supposedly dead mice from any others.

It was at five that Steve, determined to unravel the nature of the change, tried an electric current. He essayed to measure the electrical resistance of a given section of muscle to compare it with normal tissue. And, to his amazement, it was a nonconductor!

At first he could not believe it. He tried again and again. Then he stepped up the battery voltage. At twenty volts, the needle flickered over to show one thousandth of an ampere current. At twenty-five volts the current was nearly the tenth of an ampere. At thirty volts—

Steve stared in stupefaction. The bit of tissue on which he had experimented—was gone! It had vanished utterly.

He paced up and down the room, thinking furiously. Lucy watched him anxiously. During all these hours of work she had sat mousy still, feeling the need to be near him, yet very anxious indeed not to disturb him.

Steve suddenly exclaimed to himself. He took one of the remaining stiffened mice. He adjusted two moistened electrodes to its body.

"Lucy! Watch this!" he commanded excitedly. "I'll throw the switch."

HE DID. The electrodes remained. The wires remained. Even, it seemed, a drop or two of water that had been on the mouse's fur remained. But the mouse—the tiny thing which looked like a superlatively perfect carving to represent a mouse—the mouse vanished like a blown-out candle flame!

"Steve!" cried Lucy. "Where has it gone?"

And Steve regarded the empty space where the mouse had been with an entirely grim and entirely savage satisfaction.

"To the place Straussman guessed at," he said. "I guess we'll call it the other side of here! Some people have called it the fourth dimension; but it isn't that. Some have called it Avalon, and Tir-Nam-Beo, and some have called it Hell. All of them are wrong. I'm going to work like the devil to keep you from going there!"

Now he began to labor more furiously than before.

"Halfway between," he muttered. "Intermediate stage. Now, what will cancel it? The mouse is—well—magnetized. A crazy idea. Analogy, no parallel. See what happens—"

He worked swiftly with wires and rheostats, improvising a connection to an ordinary electric plug. He turned it on. He read off the A. C. ammeter.

The current going through this second mouse. He cut out resistance. He cut out more, and more, and more.

At the end, the acidulated water used to make contact with the mouse's body was bubbling furiously, and actual heat was being developed. But nothing happened. Steve snapped off the current and frowned.

"The creature's ruined now," he muttered again. "All that juice going through it at a hundred and ten volts and——"

He picked up the mouse. There was a change in the feel of the furry small corpse. It was still hard—harder than even *rigor mortis* would account for. But it was not as hard as it had been.

Steve stood still, frowning at nothing, his lips moving rather absurdly as he wrestled with his problem. Then he exclaimed. He went to the X-ray machine. Its transformer would convert low-voltage current up to a tremendous potential—a hundred thousand volts, perhaps. Steve inspected it absorbedly. He wrenched open the cabinet and traced wires. He brought leads out and fixed a spark gap and improvised condensers.

"If this works," said Steve absorbedly, "one of those medical shocker batteries will do the trick hereafter. If it doesn't work, I'm crazy to have thought it might. But Straussman said two bodies could exist in the same space at the same time, and then he vanished into thin air, as far as the world could find out. And that mouse just vanished into thin air. Straussman probably knew what he was doing. Fran Dutt knew his name, anyhow. He changed color when I mentioned it."

The physician whose apparatus Steve was using now came in. Working busily with his wires, Steve told him jerkily what he had discovered—that with thirty volts of direct current, the mouse vanished like a candle flame. That, with even a hundred and ten volts

of alternating current nothing happened—but the iron hardness of the tissues lessened.

"I've got a hunch," he explained, twisting wires feverishly. "It's crazy! But I've made a spark gap here that'll use the juice from the X-ray transformer. I've no time for fine work just now, but I'll get more or less variation in the high-frequency output by varying the gap and these condensers. And I think that if sixty-cycle has some effect, that higher frequencies ought to have more. Suppose you watch this!"

He made a last connection. One of the tiny frozen bodies lay on a great sheet of plate glass. Wires ran, one to a foreleg and another to a hind leg. Current went to those wires through condensers only.

There would be no surge of thousands of volts through the small creature. There would only be high-frequency electricity on the border of radio wave lengths, which is the familiar high-tension electricity with which side-show performers allow themselves to be "electrocuted" and perform other brazennesses. It sparks. It is showy. It looks deadly. But though it passes through the human body it is not even felt, because it reverses its direction so often that it has no effect at all.

"Now!" said Steve.

HE FLUNG THE SWITCH.

There was a startling, lurid sparkling at the improvised gap, the pungent smell of ozone, the harsh crackling of a spark.

And then there was a squeak!

The white mouse, which for twelve hours or more had been an iron-hard seeming corpse, squeaked affrightedly and struggled with the two wires which held it.

Steve cut off the switch. The mouse struggled frantically. He released it gently and dropped it in a porcelain

instrument tray. It ran about there, squeaking, and presently subsided with its beady eyes fearfully regarding the humans above it.

Steve's eyes glowed.

"I've done it!" he cried explosively. "Now we can fight those devils! Doctor, I'm Steve Waldron, as I've told you. All New York is crazy with terror, and they believe I'm a plague carrier. Actually, there's a swell spy system in operation somewhere, and a brilliant young foreigner must be helping the health department track down and isolate all possible plague carriers. That's me.

"Now, we've got to get this news broadcast: High-frequency waves below radio frequency will revive the people that are frozen to stiffness. And I tell you honestly that if you start to tell this stuff openly, one of their spies will know it as soon as the authorities do and they'll take action. They've done it three times to-day in New York, trying to get me!"

The doctor fumbled at his chin. Without words, he took one of the remaining frozen mice. He examined it carefully, making sure it was in that extraordinary cataleptic state. He placed it between the two wires. In silence, he waved Steve back and turned the switch. Again the spark, the stinging scent of ozone, the harsh crackling noise. He cut off the current.

This second mouse struggled frantically to release itself from the wires about its feet.

"You have done it," agreed the doctor, "and I shall not waste time congratulating you. I am going to call every doctor in White Plains to witness a demonstration and learn the exact technique. Then some of us will go to New York, to the hospitals where the plague victims are under observation—in the morgues. We will revive them. And then we'll name you. I

have heard radio news broadcasts to-day. Any man who appeared in New York and admitted that he had been in contact with you, Mr. Waldron, would be mobbed."

He shook hands with Steve, very formally, and sat down at his telephone. He made more than a dozen calls, and Steve heard what he said. At the end, Steve was not altogether satisfied.

"They can't all get here for two hours," he said, his eyes narrowed a little. "I'm sorry. One of them might talk in that time. But I'll get to work, modify one of these medical batteries to turn out high frequency. It wouldn't be a bad idea to fix several of them. Equip as many men as possible to revive as many patients as possible. Yes?"

HE SET TO WORK. Lucy dragged him away from his labor to have him eat something, with the doctor and herself. Then he went back to the job. He realized, now, just what the mysterious bronze ball had been, and why Fran had fastened it under his car. It had generated high-frequency waves, which neutralized whatever wave or field of force had been used to make Newark a city of death. He looked at it, but it was too badly fused to serve even as a source of information. He threw it away.

He made one battery-driven high-frequency generator. He set to work on a second, on a third. An hour had passed since the doctor's notice to the other physicians. Darkness fell. An hour and a half passed—an hour and three quarters. The doctor and Lucy watched as Steve worked, and talked, and made wild guesses.

The office was brilliantly lighted, and the expressions on the faces of the three were distinctive. Steve was intent. The doctor was absorbed. Lucy watched Steve with a wistful, maternal pride. And outside they heard the steady, unruly tumult of that never-end-

ing column of refugee cars and trucks, which had poured out of New York since ten o'clock, and showed no signs of ceasing now.

"It's a crazy guess," said Steve intently. "Here, I think this one will work now! It's a crazy guess, but there've been about a dozen men to vanish, just about the time they began to work on Straussman's theories."

He flung the little battery switch and heard the faint whine of the spark within. "And Straussman took the usual fourth-dimensional theory, turned it inside out, and put trimmings on it which only now——"

The noise which was the column of refugees changed. The motors did not stop. They kept on. But there had been a continual ululation from the folk in them—babblings, cursings, some hilarious, drunken shouting. Those voices cut off as if some one had thrown a switch. Then there was a crash, then another, and then a monstrous, long-continued thunder which Steve had heard twice before. It was the noise of collisions coming so close together that they made one steady, ghastly roar.

He jerked his head up, his face whitening. The other two in the office sat quite still. The doctor looked absorbed in what Steve was doing and saying. Lucy gazed at him with a wistful, ma-

ternal pride. Steve stared at the two of them. Neither one moved a muscle. They did not even wink. They were stiff, motionless——

"Good Lord!" said Steve thickly.

He sprang up, savagely. Then he realized. He listened. The sound of crashings died down. The city fell silent, utterly silent. It was as still as Newark was still, and as those plague spots in Manhattan were still. It was the silence of death. No, it was worse than that. It was the silence of life which was frozen, was chained, was hopelessly imprisoned in stiffened flesh.

And then Steve heard quiet, unexcited voices. They spoke in an unintelligible language. He heard footsteps. They moved in an approximate cadence, as of men marching together upon a certain definite errand. They came closer. They came directly for the building in which Steve stood with clenched fists.

Steve knew bitterly that White Plains had become what men would call a plague spot, because some one of the city's physicians had reported the presence of the plague carrier, Steve Waldron, in the city. And Fran Dutt's compatriots had made a new dead spot of the city, so that they might seize him, frozen, and Lucy, and——

They were coming now.

TO BE CONTINUED.

*You start off
with 2 strikes*

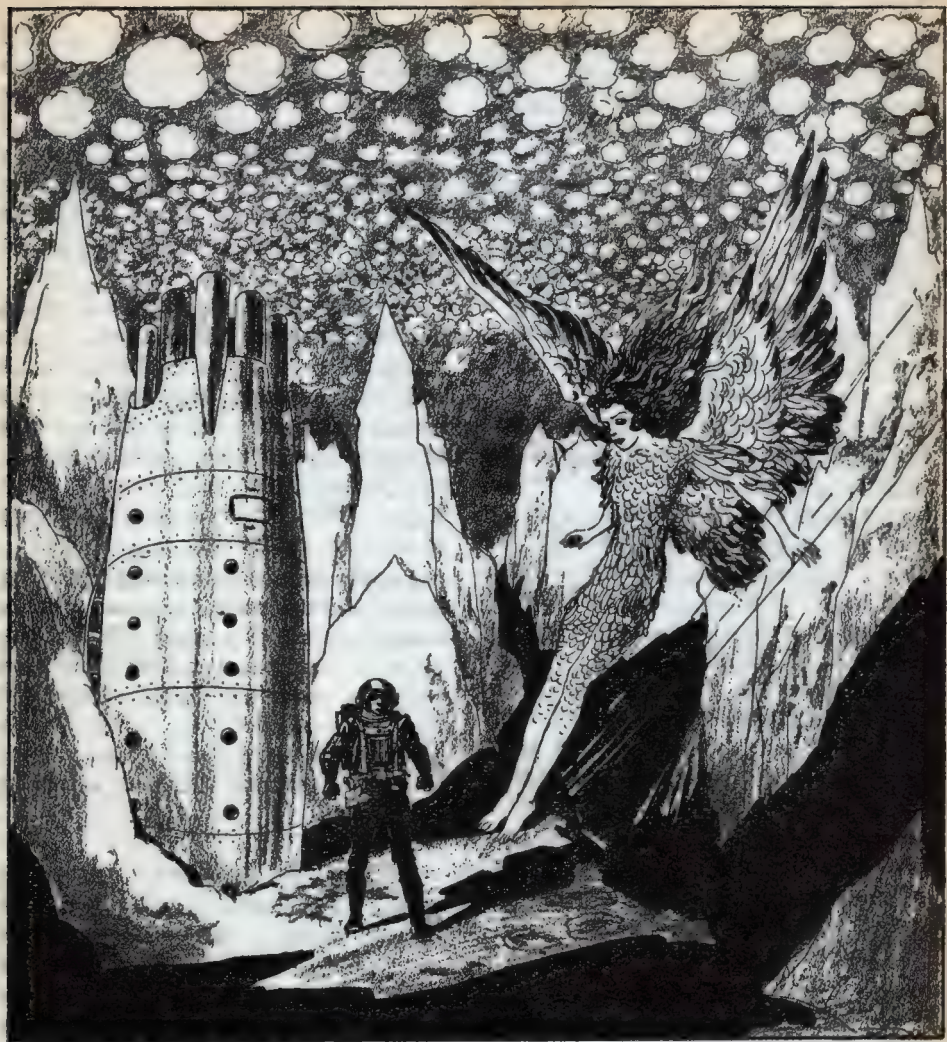


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*Wings thrown back and red hair streaming stiffly, she
was falling like a plummet!*

En Route to Pluto

by Wallace West

WHY do we keep spinning around like this?" sang Yahna plaintively as she stared out of a porthole and watched the stars chasing each other madly across the black sky. Then once more she flapped her great

red wings until they stirred up every speck of dust in the control cabin.

"I've told you a thousand times before"—I tried to keep the irritation out of my voice and stifle a sneeze at the same time—"that the gyroscopic stabi-

lizer is broken and that it's a two-man job to fix it while we're in flight. You'll just have to get accustomed to seeing the galaxies shoot past until we arrive on Pluto."

"Why can't I help you repair the gyroscope, dearest?" She struck a perfect high C on the last word; so perfect a note, in fact, that I had to resist the impulse to pick up a monkey wrench and brain her. Why, oh, why had I ever yielded to that temptation to elope with a Martian bird woman?

It had all seemed so perfectly logical that night three months ago, when I had sat in the Agan Café at Crotan, the underground capital city of Mars, and imbibed six pipes of gurlack one after the other. Here was I, Jack Harkness, outward bound from the Earth to Pluto on the first journey of exploration to that outermost of the planets.

And there was Yahna, tired of exhibiting her feathered charms, and ready to chuck it all—she had had six pipes of gurlack, too—and escape the responsibilities of one who could trace her ancestry back through ten thousand generations of entertainers, and, if she had to die, do so in the cold, clean depths of interstellar space.

It had all seemed to smack of ancient knight errantry—ladies in distress and so forth. I muffled my new-found friend in furs so that her wings wouldn't be so noticeable, slipped her past the guards, who naturally wouldn't have been at all anxious to lose one of Mars' few thousand remaining bird people, and sneaked her through endless dim passageways to the airport.

There I forced the amazed commandant to marry us at the point of a heat gun—after all, I had no desire to create a scandal which might lead to interstellar complications—and high-tailed it out into space with most of Crotan's patrol fleet at our heels.

For several weeks thereafter life had been one grand sweet song. Yahna was

charming, well-educated and beautiful, although so fragile that I sometimes feared she would break if I touched her. She talked—or rather sang—English like a Metropolitan Opera star. The bird people are unable to talk in monotones, but accompany the words with the loveliest harmonies which greatly enhance their meaning.

At first her naïveté about things Earthian intrigued and amused me. But finally the confinement and those eternal wide-eyed questions began to get on my nerves. I tried to ignore this irritation at first. Then I fought it bitterly. But by the time we were nearing Pluto, Yahna's mere presence was on the verge of driving me insane.

I really believe that it was our difference of outlook rather than our physical differences which caused the trouble—that plus the fact that long space journeys are nerve racking in themselves. I've been co-pilot with a Martian on plenty of hard trips, and managed beautifully. However, this was something different.

THE AVERAGE MARTIAN, such as one sees so often in New York these days, is hardly to be distinguished from an Earthian—a trifle taller and more slightly built—except for his massive, somewhat humped shoulders, queer, fiery-red hair and downy face and hands.

But the primitive Martian of, say, one hundred thousand years ago, was quite a different creature. His body was covered with bright-red feathers as protection from the cold, while, due to the lesser gravitation of the planet, he had developed a pair of splendid wings.

Then, as Mars' atmosphere became more and more rarified through the millennia, these wings were unable to sustain its inhabitants any longer. The structures naturally atrophied, as did those of our own penguins, for exam-

ple. To-day the puny stumps are amputated at birth.

Even in those times, however, the Martians were highly civilized, and when they were forced underground by the growing cold and lack of air, they strove to preserve their former ability to fly in one special class of the population.

In the course of time the latter became the entertainers of the planet—dancers, singers, actors, etc. In order that their wings might not atrophy, great gymnasiums with artificially high air pressure were constructed, where those of the entertaining class could exercise each day. In addition to this their every want was cared for. The result is that after all these centuries they still can fly as well as their ancestors could, and are almost objects of veneration for the average Martian.

I was jerked out of my reverie by the melting music of Yahna's voice.

"I said, dearest, why can't I help you repair the gyroscope?" she chanted as she slipped a caressing wing over my shoulders. It was then that I noticed that the long confinement without her usual exercise was doing Yahna's plumage no good. In fact—perish the thought!—she showed signs of molting.

"Look, sweetheart," I pleaded as gently as I was able. "You wouldn't know a gyroscope if you saw one. Why don't you read a book or something? I couldn't think of you getting your pretty self all covered with grease, fixing machinery. You're made for singing and dancing and flying. Now run along like a good girl. I've got all I can do keeping the course."

"But why are we going on this crazy trip, after all?" She sat down on the floor near the control seat and wrapped her wings around her until only her piquant, snub-nosed face showed amidst the shimmering plumage. "I thought that space travel was exciting. But I find it very dull."

"We're out here because Earth needs

a new supply of cheap raw materials," I answered doggedly, after shifting a quadrant which gave the starboard rocket more juice. "If Earth can find a source of radioactive minerals on Pluto she can claim it for herself and sell it to Mars and Venus. That will put some of the unemployed to work and prevent any more attempts at revolution."

"Why won't Mars and Venus get the same idea?"

"But that's impossible. They don't know the secret of our heat guns." I nodded toward the cabin wall, where I always kept the ugly little weapon hanging ready in case of emergencies. "Your scientists were using that same idea to produce great extremes of cold. We stole the invention, turned it upside down, so to speak, and produced the heat-ray transformer, and still they can't figure out how we did it. Those foreigners——" I stopped, embarrassed by my own enthusiasm.

"But I still don't see why you're spending most of your life shut up in a stupid little box spinning through space when you could be dancing in the sunshine and singing with the birds," she persisted. "I suppose you'll say it's to make money. All you Earthians do." Her large green eyes became troubled. "What is this money you're so fond of?"

"Well," I began, "money is—well—you buy things with money. Now if I have five apples——"

Suddenly an unreasoning rage seized me as I realized that this girl had no conception of the unlimited power which wealth could give or the tragedy a lack of it could bring. She had never had to buy or sell—to fight for her very existence, to see her friends starve——

"Oh, for Heaven's sake, shut up," I yelled. "Why? Why? Why? Nothing but fool questions. What are you trying to do? Make a groundling out of me? Listen! A space pilot is the luckiest man alive. If he's ambitious there are no heights he may not climb

to. With the inside information he picks up on his journeys he may become banker, captain of industry, even dictator. Oh, you don't understand. You're just a throwback—a myth—a fairy tale. There's no place for you in modern life. Why on Earth did I ever hook up with you! Go on—read your book!"

Her wings drooping forlornly, and tears trembling on her long lashes, Yahna wandered over to the window seat under one of the portholes and picked up a volume of the "Rubáiyát" which I had given her.

"A book of verses underneath the bough,
A jug of wine, a loaf of bread—and
thou——"

She sang the words, giving them a beauty which I had never imagined, and causing my face to burn with shame.

"Beside me singing in the wilderness——
Oh, wilderness were paradise enow!"

"What's a wilderness, Jack?" she murmured pathetically. "It—it sounds nice."

For answer I hooked the controls; went over and took her quivering little body in my arms. Poor kid! Of course she was perfectly useless out here. But it was all my fault. As I kissed her I made another of my vows never again to hurt her feelings.

LANDING a rocket plane is a ticklish job under the best of conditions. You have to coast down on the fading forward beams with enough momentum to keep the ship from tipping sidewise, yet not so much that she splits her seams when she hits. Bad judgment either way is bound to have unpleasant results, especially on a strange planet.

If we weren't killed on a smash landing, we still didn't have the equipment necessary to repair any leaking seams. On the other hand, if we fell over, the ship would be as helpless as a fish out of water, until we built some kind of a

scaffolding and hoisted her upright—another impossible job.

Multiply those difficulties about a thousand times and maybe you'll realize the spot I was in, with my vessel spinning around on her nose about once every two seconds. How I wished for good old Bob Filgus, my engineer, whom I had deserted so gaily at Crotan so that I might elope with Yahna. The two of us could have fixed that gyroscope in an hour. However——

I squinted through the porthole at the forsaken surface of Pluto, which now was rushing upward at the rate of several hundred miles an hour, despite the fact that I was braking with every ounce of power. It made my head swim to watch the dizzy spectacle, and the dazzling white beams of the four forward torps made my eyes water.

Although the Sun was only a pin point behind us, it still lighted up the planet about 200 times brighter than the Moon does the Earth when it is full. Under this illumination I finally managed to determine that the terrain ahead consisted of saw-toothed mountains of tremendous height, pushing themselves upward through an otherwise solid sheet of ice or snow.

Snow meant plenty of atmosphere. Air would cushion us to a great degree and make avoidance of a crash landing much easier. Pluto's temperature, I must explain, is so low during half of its circle around the Sun that its air congeals. But when it dips inside the orbit of Neptune for the other half of its slow swing, the surface becomes only about 100 degrees below zero, Fahrenheit; the air gasifies and life is theoretically possible for human beings.

The fact that I might be able to make a blind landing without a crack-up reassured me somewhat. But what about tipping over and becoming stranded? Even the most delicate altimeters wouldn't help me there. I needed my eyes and stable ground at which to look.

"This reminds me of the time when I was a little girl and we used to play with those funny Earth toys called tops," chimed Yahna, who was peering through the window over my shoulder. "Why do they stand on end, Jack? I suppose I'm being awfully stupid again, but I never could understand why they didn't fall over——"

"*You* wouldn't!" I grunted before I could stop myself. Then I let out a whoop of astonishment and delight. Why, of course! Why hadn't I thought of it before? A ship couldn't possibly tip over while spinning. No matter how softly I brought her down, she'd stay upright if I landed on a fairly level surface. The nose probably would drill itself into the ground for a yard or so, and the rocket ports would be clogged, but I could fix that easily.

I grabbed Yahna by the shoulders and kissed her enthusiastically—on the nose, it so happened—then made a dash for the controls. We'd make it yet!

WE CAME DOWN soft as a feather, blasting the snow beneath us into nothingness and drilling into the frozen earth beneath it. As I had anticipated, the sudden stoppage of our spin sent both of us sliding round and round the floor of the control room until we jammed under the chart table, out of breath, but with no other injuries than a few bruises.

I staggered to my feet only to fall on my nose, so dizzy that I could hardly see. Yahna did the same thing, after which we sat and laughed helplessly at each other until the vertigo wore off.

When we could navigate once more we started exploring the ship, and found that no appreciable damage had been done. The forward ports were, of course, buried in the ground, and it was not until we reached the rocket firing chamber in the stern that we saw daylight. The snowdrift into which we

had dived had fallen in on the ship and almost buried it.

"Now what do we explore?" chanted the girl as she stared through the rear porthole at the forbidding gray landscape. "Those raw materials you spoke about certainly look raw enough to satisfy anybody."

"Well"—I hesitated after studying various meters—"the air pressure is about the same as that on Earth and its composition seems breathable. Gravity about that of Mars. Temperature 172 below zero. I think we could chance going outside in space suits——"

"Space suits." She laughed, rumpling her feathers. "Well, you can wear one of the ugly things if you want to, but I'm going out this way. After all, the temperature back home often drops about as low as this during the night. And, oh! I want so to fly again!"

"You'll freeze your feathers off," I grunted as I wriggled into my suit and adjusted the helmet. "I'll take some blankets outside, anyway, in case you get a chill."

"Aren't you going to take your heat gun along, too?" Yahna trilled as I threw my weight on the levers which opened the outer port.

"What for?" I grunted as I heaved and twisted. As usual, the cursed door had been slightly calcined during our passage through the atmosphere, and didn't want to budge. "There's no life on Pluto at this temperature."

"Why not?"

"Well, because——" I groaned; then, in order to stop a further flood of senseless questions, yanked the holster out of the rack and buckled it around my waist.

The port swung open at last, letting in a thin blast of air so deathly cold that I snapped the glass front of my helmet shut at once.

But Yahna didn't seem to mind in the

least. She threw her arms wide and took in great gasps of air.

"Oh, how lovely," she chanted as I again marveled at the ability of Martians to withstand great extremes of temperature. "It's like the wine your 'Rubáiyát' talks about after all these weeks of synthetic atmosphere. I'm going out."

Springing gracefully through the port-hole, she landed on the snow outside, spreading her gleaming ten-foot wings, beat them together exactly as a bird does, and fairly screamed with delight. A moment later she left the ground and went swooping up into the gray twilight.

I paused a moment to toss out a roll of blankets and to close the port. I was afraid the batteries in the engine room might freeze otherwise. Then I, too climbed out on the snow bank surrounding the ship.

AFTER WATCHING YAHNA swoop and glide like a swallow until I began to get dizzy, I turned my attention to the surrounding landscape. The first thing which puzzled me was the snow. Under ordinary circumstance, if a space ship, its surface heated by passage through an atmosphere, should land in a snow bank, it would melt a great hole in the drift. In this case, however, although the snow was slowly receding from about the vessel, there was no sign of melting.

The next thing I noticed was that the vent from my helmet was not surrounded by a cloud of vapor as it should have been, but that my breath, upon reaching the outer air, formed a sort of miniature snowstorm, which eddied around me and finally fell to the ground.

Frowning, I picked up a double handful of snow in my electrically heated mittens and stared at it in bewilderment. It vanished almost at once; but when it was all gone the gloves were not wet. The snow really seemed to evaporate rather than melt. For a moment the

thing baffled me. Then I remembered the temperature reading I had made in the cabin. Of course! At 172 below zero, Fahrenheit, carbon dioxide would congeal. The stuff which covered the surface of Pluto was not snow, but solidified gas!

My curiosity satisfied on this point, I began examining the outcroppings of shiny gray rock which pierced the drifts. I broke off a chunk and hefted it. Queer stuff! It had scarcely any weight at all. Could it be? After some difficulty I fished out a match from one of my pockets, lighted it and touched it to the rock. There was a blaze of light as the stuff ignited. I dropped it just in time to avoid a bad burn, then was almost knocked over as the heat gasified part of the snow bank on which it had fallen.

"Good Lord," I gasped as I watched the flame burrow deeper and deeper into the drift. "If the whole plain is covered with magnesium and this sets it off, I'll go up in a cloud of smoke in about thirty seconds." Luckily, the specimen I had dropped was so small that it burned itself out before it melted its way through to the bottom of the drift.

When the great flare died out I blinked helplessly, until my eyes became reaccustomed to the surrounding twilight. Then, as I was recovering from this shock, I heard Yahna screaming high above me. A moment later I located her. Wings thrown back and red hair streaming stiffly, she was falling like a plummet!

Just as it seemed certain that she would crash, the girl swung her wings forward and landed, light as a feather, not ten feet from me.

"The flare? What was it, Jack?" she crescendoed.

"Nothing important," I lied. "Just a little magnesium I touched off accidentally."

"And those clouds," she continued, pointing upward breathlessly.

"Clouds!" I jeered. "If it's cold enough to freeze carbon dioxide there can't be any clouds. Even you ought to know that!" To humor her I glanced at the sky; then, despite the cold, I opened the visor of my helmet to look again. Yahna was right! The sky was full of little puffy white clouds. What was more, they didn't act like human clouds should. Instead of drifting with the wind, they seemed to be drifting toward us from all directions, as though attracted by the recent flare.

"I'm—I'm cold." Yahna shivered.

"I should think you would be, gallivanting around up there like that. Let's get back to the ship."

It did seem cold, even inside my suit, as we hurried back to the hole in the snow above which projected the stern of the rocket.

"Could it be the clouds causing it?" chattered my companion as she stumbled along beside me. "They seemed unfriendly, somehow—up there."

"Of course not," I answered, but I could not resist an apprehensive glance over my shoulder at those queer, diaphanous puffs of white. There were hundreds of them now, not only behind us, but also closing in in front. "Maybe you're right," I muttered grudgingly at last. "Come on. Let's run."

"I—I can't," she quavered. "My legs—feel funny."

For answer I picked her up bodily and dashed for the ship, those red wings brushing the snow into strange whispers behind me.

BUT when we reached the *Pluto* another shock awaited us. Due to the radiation of the still-warm hull, the walls of carbon-dioxide snow had evaporated so that they now stood all of ten feet away from the ship. There was no way of reaching the stern port. The forward port, down at the ground level, was, of course, still locked from the inside.

"Could I help, Jack?" quavered Yahna, struggling out of my arms.

"Well, I guess maybe you could at that," I conceded. "If you would fly to the door, pull it open and go inside and throw me a rope, I might make it."

She sprang forward lightly, reached the handholds on the port, braced herself against the side of the ship and tugged with all her strength, wings fluttering wildly. Nothing happened.

"It's stuck, Jack," she called at last. "I'm not strong enough."

"Come on back then, and get under these blankets," I directed. "We'll have to try something else."

"I'm sorry," she whimpered as she fluttered back and nestled under the pile of blankets I had prepared. "I never was so cold in all my— Oh! Jack! Look at those clouds now!"

I glanced up, then ducked instinctively. There was no doubt about it. Those clouds were alive, and they meant us no good. From all directions they were closing in upon us, until they resembled a great, fleecy blanket which dimmed the light of the Sun. And as they came closer the cold steadily increased.

"I've worked in a space suit in open space," I groaned as I beat my arms against my chest to restore circulation, "but I never felt cold like this. It must be close to 250 below zero. What on earth's causing it, do you think?"

"Could they be alive—some sort of frost people?" she whispered. "Look, they move as though under some central command! On Mars there are legends—" She moaned as the cold bit deeper, even under the thick pile of blankets.

"I started to say 'Nonsense!' then bit my lips as I recalled that Yahna had been right on a number of occasions recently.

"Well," I amended, "if they're some sort of frost demons, my heat gun should

stop them." My hands were clumsy and slow as I struggled with the holster, but the gun finally came loose. I pressed the trigger and sent a pencil of flame sweeping back and forth across the cloud blanket, which now hung only a few hundred feet above our heads.

Again nothing happened! The ray was absorbed as though by a mass of cotton. This gun, which could stop a yaggoth or a welk at 500 paces, was as useless as a cap pistol against these devils.

"I can hardly breathe," whimpered Yahna. "They're doing something to the air, Jack." She buried her head under the blankets.

And once more she was right. The very air around us seemed congealing into a snowstorm. Undoubtedly the oxygen and other gases were beginning to behave as the carbon dioxide already had done. I switched on my artificial air supply and got some relief, but could not avoid the gnawing cold. The temperature was undoubtedly hovering at the unbelievable level of 275 below, much lower than that of outer space. To make it worse, a hurricane, caused no doubt by the vacuum created through the air's solidification, began raging about me and threatened to sweep me off my feet.

THROUGH IT ALL the clouds looked down, soullessly, calculatingly, it seemed, to my dimming senses, but unquestionably alive in some alien fashion. I laced them frantically with my heat gun, but produced not the slightest retreat. We were slowly being frozen. A few moments now and we would become specimens for some un-Earthly laboratory.

"Yahna," I wheezed painfully, "can you hear me? Those devils have beaten us. Good-by sweetheart. You're a swell egg. I'm sorry I've been so rotten."

"Good-by, Jack," she sang hysteri-

cally as she flung off the blankets, staggered to her feet and crept into my arms. "I'm sorry, too—that I've been so—useless. But I thought you humans said you could always fight—devil—with—fire."

"What's that you said?" I yelled.

"Getting—warmer—now," she gasped as she crumpled in a forlorn little heap at my feet.

"Yahna," I pleaded wildly as I heaped the blankets over her again.

"Guess—have fight frost devils—with——" Her voice trailed off into a discord and stopped.

"With what?" I screamed, shaking her frantically. "Don't give up, Yahna. With what?" In my hysterical fright I was suddenly convinced that if only she would say the right word we could be saved.

"Go 'way," she whimpered. "Wanna go sleep. Cold!"

"Cold!" I sprang upright and shook my fist madly at the hovering cloud people. "Cold!" I beat my hands against my chest until some vestige of circulation returned to them, then searched my pockets for a screw driver. What a fool I had been!

Crouching down on the snow, I worked desperately on the heat gun. Of course, you are familiar with the way those weapons work—just the opposite of the old-style electric refrigerator—building up heat by a sort of transformer until it emerges as pure vibration.

Could I do it in the few minutes of life yet remaining to me? Again and again I dropped the screw driver into the snow and scratched frantically to retrieve it. But at last I succeeded in reversing the circuits.

Too weak to stand now, I lifted my leaden arm, aimed at the living cloud banks, pressed the trigger and prayed.

The gun snarled, louder than the storm. A narrow column of snowflakes

formed between the muzzle and the drifting mists above. Then a strange, agonized ululation tore through the darkness. The gun bucked and jumped as I swung it back and forth. Was it my imagination, or were the clouds thinning, breaking up, drifting away? Was it possible that these frost beings, although impervious to flame, could be fought in their own medium?

Things grew black around me. A pleasant lethargy stole over my body. But I clung doggedly to the gun with both hands as my thoughts raced like those of a drowning man. Let's see—gun has amplification to the fortieth power. That means, close to—460 degrees below zero—absolute zero—nothing. Absolutely nothing living could exist—that temperature— Poor, dear Yahna—smart girl, after all— If I—

"JACK! Jack!" Somebody was shaking me fiercely. "Are you alive, Jack? They're all gone. Why don't you speak to me?"

"Another of your fool questions. How can an icicle speak!" I groaned as I forced open my eyes. Then I blinked in astonishment. Yahna was bending over me as I lay in the cabin of the *Pluto*.

"After the frost devils ran away I

went back to the ship, managed to pry the door open, tied a rope around you, hitched the other end to a windlass and pulled you across," she trilled, looking as proud as a peacock—if peacocks were feminine and had red feathers.

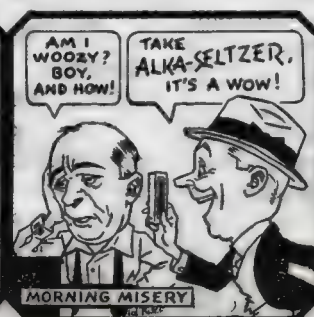
"Well, you little devil!" Even had I tried I would not have been able to restrain my admiration—and I did not try.

"I'm glad you took my suggestion about the frost people," continued this new Yahna. "Now, as soon as you feel better I'll help you fix the gyroscope. I'm tired of being treated like some sort of doll."

Several hours later—I was not really much the worse for wear if you discount frostbitten ears, nose and fingers—we finished the job on the gyroscope.

"Do you think I could ever become a space pilot, Jack?" asked the grease-smeared, weary girl, as she crawled out from under the big machine and sat down beside me on the floor. "This has been fun."

"Well"—I grinned judiciously as I kissed the only clean spot on her face—"if you feel like that I'll let you help pilot the *Pluto* home after we finish our explorations. And I'll coach you for the quizz, too. But I don't think," I added as I surveyed her thoughtfully, "that you ought to face the examiners until I have you dry-cleaned."



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A LEAK in the FOUNTAIN of YOUTH

*A new story by the author of
"Scandal in the 4th Dimension"*

by A. R. Long

THIS is not an attempt to seek vulgar publicity for the extraordinary experimental work in gland control carried on by my friend, Professor Aloysius O'Flannigan; neither is it an effort to exonerate him in the public mind of the supposed murder of Gustavus Adolphus Lindstrom. In the first place, any type of publicity whatsoever is highly distasteful to Aloysius; and, in the second, the living presence of Gustavus himself is exoneration enough. All I wish to do is to set down the truth, in order that the wild rumors accusing a reputable man of science of such preposterous—not to say scandalous—behavior, may be stilled.

Although Aloysius O'Flannigan is still a very young man, he has already accomplished some most remarkable things in the field of biochemistry. Not least among these is his growth-and-age-control serum, based upon a series of highly intricate experiments with the glandular system.

"It is really quite simple when you get down to it, Eric," he told me one day in his laboratory. "Science has known for a long time that the growth and aging of the body are governed by certain glands. There is, for example, the pituitary gland, controlling skeletal growth; the thymus, regulating physical development to adolescence; the thyroid,

governing mental and nervous development; and all the rest of them.

"Science has even realized that the control of these glands and their hormones means practical control of the development of the individual. And that is what I plan to do, Eric."

Here he leaned forward and tapped me impressively on the knee, while his blue eyes shone excitedly behind his shell-rimmed spectacles. "I mean to control the entire glandular system, so that a man may become old or young, large or small, at will. It's entirely logical."

I shook my head. "It may sound entirely logical in theory," I told him, "but you'll find it's going to be something else in practice. I don't want to hurt your feelings, Aloysius, but if you think, for example, that you can turn an old man into a boy, you're—well, due for a keen disappointment. It can't be done."

"And why not?" he demanded.

"Why not!" I echoed. "Well, for one thing, there's skeletal growth. Be reasonable, Aloysius. It is perfectly comprehensible that you may be able to arrest bodily development through control of the glandular system; but to claim that you can reverse the process is sheer nonsense."

"You understand the process of coal-



"Merciful Heaven! Where did that come from?"

tion in the unicellular animals, don't you?" he asked. The light of battle was beginning to appear in his usually mild eyes.

"Certainly," I answered, a little nettled that he should question my knowledge on such an elemental point of zoology. "It is the reverse of the process of subdivision. Instead of one amoeba or protozoan subdividing to form two new individuals, two amoebæ coalesce to form one. But what has that got to do with——"

He interrupted me. "And you realize that the individual cell structure of the human body is similar to that of the unicellular animals, including cell division in the process of growth, don't you?" he persisted. "Well, then, why couldn't coalition take place in a similar manner, also?"

"But it doesn't," I protested. "You know very well that it doesn't."

"But it could through control of the glandular system. Don't you see it?"

All I could see was that we were arguing in a circle; so I gave it up.

IT WAS about three months after this that the bank robbery occurred. I read the account of it in the morning paper as I ate my breakfast; but at the time noticed nothing beyond the fact that our largest suburban bank had been relieved of one hundred thousand dollars by a masked man who had entered just a minute before closing time the day before, and held up the place single-handed. Just as he was leaving, his mask had slipped down; the paying teller had seen—— Here the story was continued on an inside page; and I, being in something of a hurry, did not take the time to finish it.

I had planned to drop around to see Aloysius that morning to ask his opinion on an article I had written on the unemployment situation in early Babylonia; but when I reached his home, all thoughts of the matter were driven from

my mind. Our old college friend, Gustavus Adolphus Lindstrom, had just arrived ahead of me; and he was in trouble.

Now, being in trouble is not precisely a new position for Gustavus Adolphus. In the first place, he is a free-verse poet; and in the second—— But the first will cover everything, so I will not trouble to elaborate.

Usually his escapades are of the picturesque but comparatively harmless variety; but this one was different. In fact, it was so different that it centered around the Suburban Bank robbery, with Gustavus Adolphus cast in the leading rôle.

It was one of those damning cases of circumstantial evidence and mistaken identification. The paying teller of the bank had been taken down to police headquarters to try to identify the holdup man in the rogues' gallery. When he had failed to find his man among the accepted celebrities, the police, in desperation, had brought out a collection of minor offenders; and from these the misguided bank clerk had picked out Gustavus Adolphus!

"But, Gussie," inquired Aloysius, "how in the world did your picture ever get in the rogues' gallery?"

Gustavus Adolphus looked somewhat embarrassed. "You see, it was this way," he began. "A few years ago, I headed a movement for the practical revival of classicism. One of our aims was to bring back the ancient Greek form of dress for both men and women; and I, as head of the movement, felt it my duty to put the theory into practice.

"But, when I walked down Broadway in the tunic and sandals of Sophocles' time, I was arrested at Forty-second Street and charged with both appearing in public improperly clad and attracting a crowd that obstructed traffic. I—I spent three months in jail," he finished lamely.

WHILE he was explaining this to Aloysius, my mind was busy with the problem at hand. "Of course, it's a case of wrong identification based on coincidental resemblance," I said now. To assume that Gustavus Adolphus would have held up a bank, even if he had known how, was naturally ridiculous. "But the mistake can be cleared up readily enough. All you need to is produce your alibi for yesterday afternoon, and then——"

"But that's just the trouble," he interrupted piteously. "I haven't got an alibi."

"You—what?" Aloysius and I stared at him in blank amazement.

"What I mean is, I've got an alibi, but I can't prove it," he explained. He looked pathetically from one of us to the other.

"But where were you?" I demanded.

"In a Greek sarcophagus at the university museum," he answered meekly.

I began to lose patience. "This is no time for flippancy," I told him. "Stop trying to create a sensation, and tell us where you were."

"But I have told you," he protested. "I wanted to write a poem on the death of Socrates; so I went to the Greek wing of the museum, and climbed into the stone sarcophagus—the one with the opening above the face and shoulders of the occupant—to put myself in the mood. I—I'm afraid no one saw me there."

"Didn't any one come into the Greek wing?" Aloysius inquired.

"Oh, yes," Gustavus Adolphus said. "One of the university students came in with a young lady. He came quite close to where I was, and flicked cigarette ashes through the opening of the sarcophagus. But since the interior of one of those things is rather dark, he couldn't have seen me unless he had deliberately leaned over and peered in."

"But you must have been able to see him," I pointed out. "Couldn't you rec-

ognize him if you saw him again?"

"I'm afraid not," he admitted regretfully. "You see, the cigarette ashes landed in my eye; and I wasn't able to see anything for quite some time. All I know about him is that the young lady addressed him as Lover Boy; and that is hardly sufficient for identification."

Aloysius and I agreed that it was not.

"This is beginning to be serious," Aloysius said gravely, as we appeared to be at a deadlock. "If you can't prove an alibi, you'll never be able to convince the police that a mistake has been made."

"I realize it," Gustavus said; "and I don't know what to do, or where to go."

I was tempted to suggest back into the sarcophagus; but, as I had warned him only a minute before, it was hardly the time for levity. Something had to be done, and done quickly.

I looked at Aloysius. "What are we going to do?" I queried.

"I thought," Gustavus Adolphus ventured timidly, "that perhaps Aloysius could do something to me with his science, so that the police couldn't recognize me."

Aloysius' nostrils quivered. "Be quiet, both of you," he commanded, "while I think."

He began to stride up and down the room, his chin sunk forward upon his breast, and his hands clasped loosely behind his back. Gustavus and I watched him anxiously. We both knew that if he was to think of something, it would have to be fast and it would have to be good.

Suddenly he stopped in the middle of his pacing, and smote his left palm with his right fist. His eyes were gleaming behind his thick-lensed spectacles.

"I've got it!" he cried. "My glandular control serum, of course!"

I sprang out of my chair at the words. "No, Aloysius, no!" I exclaimed aghast. "You wouldn't dare!"

He ignored me, and addressed Gustavus Adolphus. "It's a new formula that I completed less than a week ago," he explained. "By its use, I can change you temporarily to a boy of about sixteen. Shall I do it?"

"Don't you let him," I warned Gustavus. "It's liable to kill you."

Gustavus looked uncertainly from me to Aloysius. "Is it dangerous?" he inquired.

"Of course not," Aloysius declared impatiently. "Why, only yesterday I changed a battle-scarred tomcat to a mewling kitten; and to-day it's enjoying life to the full."

"Will it hurt?"

"You'll have to ask the tomcat. But it's practically certain to be painless, since you merely fall asleep, and, when you waken, years have dropped from your age."

"It sounds rather attractive," Gustavus confessed.

"It sounds too quick to be good," I commented.

"Eric, you be quiet," Aloysius snapped at me. Now that the chance to try out his pet theory upon a human being had been practically dropped into the lap, he wasn't going to have it snatched away by anybody. "Under ordinary circumstances, the treatment would cover a period of months; but we've got no time for that now. We've got to act fast."

A SUDDEN, businesslike ring at the front doorbell was like an exclamation point after his words!

"The police!" Gustavus gasped, and went limp.

Aloysius seized him by the scruff of the neck, and propelled him toward the laboratory. "Answer the door, Eric," he said. "If it's the police, hold them off until I get back."

I had the sensation that each board

I trod upon was on springs and gave under me as I walked down the hall to the front door. When I opened it, the worst was realized: A burly policeman confronted me!

"Are you Professor O'Flannigan?" he bellowed. I realized afterward that he must have spoken in only an ordinary tone of voice, but it sounded differently to me then.

"No, officer," I replied, glad that my first words, at least, could be the truth. "I'm only his friend, Eric Dale. Did you want to see the professor?"

"An' what would I be doin' here if I didn't?" he answered.

This didn't seem to call for an answer, so I didn't attempt one. "If you'll excuse me a moment, I'll go and call him," I offered instead, and started back down the hall. To my horror, the policeman followed me!

For a moment I had the hideous vision of his forcing me to guide him straight to the laboratory where Aloysius was doing heaven alone knew what to Gustavus Adolphus, and, then, clapping irons on both of us for aiding and abetting a dangerous criminal; but the situation was saved by the entrance of Aloysius in person, alone and wholly self-possessed.

"Was some one at the door, Eric?" he inquired innocently; then, pretending to see the policeman for the first time, "Oh, good morning, officer. Can I do something for you?"

The policeman touched his cap. "It's about a friend of yours I've come, professor," he explained. "A man named Gustavus Lindstrom. Have you seen him this mornin'?"

Aloysius registered just the right amount of annoyance and concern. "Don't tell me that Gussie's gone and got himself into trouble again!" he exclaimed protestingly.

The policeman explained that Gustavus was wanted for the robbery of the

Suburban Bank. Aloysius was properly shocked.

"I simply can't believe it!" he declared. "Why, I saw him only day before yesterday, and he said nothing at all about intending to rob a bank."

"They seldom do," the policeman said. "But seein' as you're such a good friend of his, he may try to get in touch with you now that it's over; and, if he does, will you let us know, professor? If he's innocent, you'll be doin' him a favor by helpin' him prove it."

Aloysius intimated that he would—without, however, definitely committing himself; and the policeman departed.

"Now," I demanded, turning with the ferocity of overwrought nerves upon Aloysius, "what have you done with Gussie?"

He raised a calming hand. "Gussie's all right," he assured me. "I gave him a large dose of the glandular control serum, and he's sleeping quietly in my room. Would you like to see him?"

I replied that I most certainly would.

He conducted me to his bedroom adjoining the laboratory. There lay Gussie sleeping peacefully, and with an expression on his face that for sheer guilelessness would have done credit to a hydrocephalic idiot.

I bent over him and examined him. "Heavens!" I cried almost at once. "He's young already!"

Aloysius laughed. "Your imagination, Eric," he said. "The serum won't begin to take effect for nearly an hour."

In spite of Aloysius' assurance that everything was now all right and that Gustavus would be safe until the real bank robber was discovered, I returned to my home with a feeling of strong misgiving. Suppose the serum should fail to take effect upon a human being; or suppose, having been given in one large portion instead of small quantities, it should kill or cripple Gustavus! But, as the day wore on and none of

the papers brought out an extra featuring either his capture or his murder, I decided that I was giving myself needless worry; and so I banished the matter from my mind.

BUT it was false security. At three o'clock the next morning, my telephone rang. Aloysius was on the wire.

"Eric," he almost whispered, "come over at once! We're in the devil's own predicament!"

"Gussie——" I began incautiously, but he interrupted.

"Don't ask questions over the phone," he warned. "I'll explain when you get here." He rang off.

I dressed as quickly as possible, and hurried around to where he lived. He was waiting for me at the door.

"What on earth's happened?" I demanded. "Have the police——"

He waived the police aside as if they had been of no consequence.

"It's nothing to do with the police," he said. "Eric, we've a *real* problem on our hands now. Come into the study."

He seized me by the arm, and almost propelled me into the room. "Look," he commanded, and pointed dramatically at a large, overstuffed armchair.

I looked. Something was lying upon the seat of the chair. At first I thought that it was merely a blanket roll; then, I realized that it was alive. Bending closer, I discovered with a sense of shock that it was a very young baby!

"Merciful Heaven!" I gasped, and took a step backward. "Where did that come from?"

"Don't you know?" Aloysius asked.

I raised my eyebrows. "Doorstep contribution?" I inquired.

He made an impatient gesture. "Won't you understand, Eric?" he asked piteously. There was soul sickness in his eyes. "It's Gussie!"

"Gussie!" I sat down weakly upon the nearest chair, and tried to keep my head from spinning while he explained. It seemed that either he had given Gustavus a slight overdose of the serum, or the stuff taken in quantity acted differently than when taken in small amounts. In any case, Gustavus had failed to stop rejuvenating when he had reached the physiological age of sixteen, but had continued to grow younger and younger until he had reached his present state.

"It was terrible!" Aloysius said, shuddering. "For a while I was afraid he was going to vanish entirely right there before my eyes. Eric, what are we going to do with him?"

I considered the situation. Once the shock of beholding Gustavus as an infant had abated, matters did not really look so bad. After all, what Aloysius had set out to do was to disguise Gustavus so that the police would not recognize him; and that was precisely what he had done. Why not, I argued, permit Gustavus to remain as he was until after the real criminal had been apprehended, when he could be restored to his normal state?

This suggestion relieved Aloysius enormously. He permitted me to go home and finish my night's sleep in peace.

The following noon I dropped around again to see how he was getting on. I found him preparing a bottle for Gustavus.

"Eric," he said through clenched teeth, "this can't go on. I've done nothing since five o'clock this morning but wait on Gussie."

"Five o'clock!" I echoed. "That's no hour to get a child up. Why didn't you let him sleep?"

He looked at me in disgust. "That shows how much you know about it," he retorted resentfully. "He got me up. At five o'clock sharp he started to

yell like a banshee, and I had to walk the floor with him for two hours before he'd quiet. Since then it's been one thing after another. I tell you, I can't stand it!"

It was on the tip of my tongue to remind him that I had warned him against this experiment in the first place, but I saw the dark circles under his eyes and refrained. After all, it would be unkind to twist the weapon in the wound just then.

"There's only one thing to do that I can think of," I told him. "You'll have to hire a nurse."

He hired a nurse, a grim-visaged man-hater named Miss Mabel McGillicuddy. She was a woman with an iron jaw and a physique like a horse, but she understood the care of infants. Aloysius gave her an apologetic-sounding story about Gustavus' being his orphaned nephew, and conducted her to the nursery. She appeared a trifle dashed when she discovered that her charge's entire wardrobe consisted of an old, cut-down polo shirt and a dozen and a half dinner napkins; but she said nothing and got to work.

TWO MONTHS PASSED, not entirely uneventfully. The police, for some reason that we never entirely fathomed, were positive that Gustavus had come to Aloysius the day after the bank robbery; but they could prove nothing. Repeated questioning of Aloysius and even a search of the premises during his absence, got them nowhere. And, meanwhile, he whom they searched rode out in his own perambulator under their very noses.

Of course, we knew that this state of things could not go on indefinitely; but when the next move came, it found us unprepared. It was, in fact, nothing more nor less than the arrest of the real bank robber, taken in the attempted holdup of a bank in a neighboring city.

Upon being identified by the teller of the Suburban, he admitted the first robbery; so, the good name of Gustavus Adolphus Lindstrom had been cleared.

It would now seem that all that remained for us to do was to administer the serum that would restore Gustavus to his normal physiological age. That was what we thought, too; but we soon learned that it was not so simple. The realization came to us when we approached the nursery door with a hypodermic of the serum, and discovered that Gustavus was not alone. We had forgotten Miss McGillicuddy.

"What," I inquired, "are you going to tell the nurse?"

Aloysius looked blank. "I hadn't thought of that," he confessed. "You—you don't suppose she'd believe the truth?"

"I *know* she wouldn't," I answered with conviction. "You'll have to do better than that."

He sighed. "The only thing I can think of, is to tell her that her services are no longer needed," he said; "and I'll have on awful slim chance of getting away with it."

"There's only one other way," I pointed out. "The woman must sleep some time out of the twenty-four hours. You'll have to watch your chance and give Gussie the serum then."

But it was easier said than accomplished. All our visits to the nursery found Miss McGillicuddy wide awake and on the job. Finally, we divided the day into six-hour shifts during which we alternately kept watch in an effort to catch her napping; but this met with no success, either.

Worse yet, Miss McGillicuddy now seemed to know that she was under secret surveillance; for she began to regard Aloysius and me with a suspicious eye, and kept the nursery door locked most of the time, so that we had to knock to gain admittance.

It was at about this time that Aloysius discovered that we ourselves were being spied upon. He mentioned it to me when I dropped around one morning.

"Eric," he began uneasily, "I don't know what can be the matter, now that the bank robber has been arrested and Gussie is no longer under suspicion; but a policeman's been watching this house for the past three days. He's taken a room across the street, and he keeps looking over here with a pair of field glasses."

"Miss McGillicuddy——" I suggested.

He nodded. "I'm afraid so," he said. "That female never did like me from the beginning. And now our watching her has made her suspect Heaven alone knows what, and she's gone to the police about it."

"I'm afraid we'll have to do what we should have done in the beginning," I told him gloomily; "definitely discharge the woman."

We each took a neat drink of Irish whisky to help our courage; then we tackled the job. To our amazement, it was easier than we had anticipated. Miss McGillicuddy said nothing, but she gave us one long, unreadable look. Then she executed a military about face, and marched off to her room to pack her belongings. A half hour later, we heard the front door close firmly behind her.

WITH a combined sigh of relief that sounded like the open steam valve of a locomotive, Aloysius and I bounded upstairs to the nursery. He was ahead of me as we reached the nursery door, and so it was he who first bent over the bassinet. The next instant I saw him clap his hands to his head and stagger back.

"Good Lord!" he groaned. "She's taken Gussie along with her!"

For a minute or so we could only stare at each other in dumb stupefac-

tion. Then my brain cleared a little.

"It's kidnaping!" I cried indignantly. "She can't do this! We'll go to the police ourselves, and enter a complaint."

But we were saved the trouble. At that very minute, the doorbell rang.

On the step stood the policeman who had called on us two months before!

"Professor O'Flannigan," he pronounced severely when he had shouldered his way into the hall, "I want to know what it is you've done with Gustavus Lindstrom."

And then the awful facts came out: Gustavus had been known to come to Aloysius' house the day after the bank robbery, but had not been known to leave. It had been assumed by the police that Aloysius was protecting his friend from arrest for the bank robbery; but when the real criminal had been apprehended and Gustavus still failed to appear, it was felt that something serious must be the matter.

When a check-up with Gustavus' relatives revealed no clue to his whereabouts, the police had formulated a theory. It was that Gussie had been foully murdered by his mad scientist friend, Professor Aloysius O'Flannigan!

"But that's preposterous!" Aloysius protested indignantly. "I haven't harmed Gussie!"

"Then what have you done with him?" the policeman asked, not unreasonably.

Aloysius opened his mouth to reply, but closed it again without uttering a word. If he told the truth now, he'd be locked up as a raving lunatic.

"Professor O'Flannigan is not quite himself this morning," I put in helpfully. "His little nephew has just been kidnaped by the nurse who was employed to look after him."

The policeman smiled sourly. "We know all about that," he told me. "That nurse told us how the professor here was actin', and it was what decided us

in thinkin' that somethin' was wrong up here." He turned back to Aloysius. "I guess you'd better come along with me to the station, professor," he said. "The sergeant'll be wantin' to talk to you."

Aloysius paled. "Very well, officer," he said weakly. "Excuse me while I get my hat and coat."

He started slowly down the hall toward the laboratory. At the door, however, he turned.

"Eric, remember Socrates," he called, and disappeared into the room.

We waited in stony silence. What the policeman's thoughts were, I have no idea; but I know that mine were in a turmoil. If Aloysius was locked up on suspicion of having murdered Gussie, how would he be able to bring Gussie back to normal? And unless Gussie was brought back to normal, how was Aloysius going to prove his innocence? It would do no good to tell the truth; there are some things that even the police refuse to believe.

SUDDENLY I began to realize that Aloysius had been gone a very long time. The policeman, too, realized it; for his face became ominous, and he made for the laboratory door. I, beset by a hundred whirling fears, followed, and was immediately behind him when he entered the room. It was empty; but an open window told the story: Aloysius had realized his predicament, and had chosen liberty by way of the laboratory window and the back fence.

For the next five minutes that policeman's language was awful. But he finally calmed down; and after grilling me on Aloysius' habits and possible hide-out, left for police headquarters. I, much to my surprise, was permitted to go home.

I spent the next few hours listening to police descriptions of Aloysius over the radio, and wondering what he was doing. I had not the faintest idea where

he could have gone, but I knew that I would have to get in touch with him some way to arrange for the restoration of Gussie.

And then, like enlightenment from Heaven, came the memory of his parting words to me: "Eric, remember Socrates."

I jammed on my hat and made a dash for the university museum.

The Greek wing was empty when I entered it; nevertheless, I approached the stone sarcophagus with caution. I was in the act of lighting a cigarette with elaborate nonchalance when a voice spoke from the sarcophagus' interior:

"Eric, if you drop ashes in here I'll come out and murder you."

"Aloysius!" I gasped in relief. "Thank Heaven you're here!"

"According to Gussie's experience, it seemed the one sure place where nobody would look," he replied. He squirmed to a sitting posture, so that his head protruded just above the opening in the sarcophagus. "You've got to help me get Gussie back in shape," he said. "Do you think you can carry out a few simple instructions?"

"I'll try," I promised. "What are they?"

"First," he went on, "go to my laboratory and get the hypodermic with the corrective serum; you know which one it is. Next, take another hypodermic and make it one quarter full from the bottle on the end of the second shelf in the closet. It's a sleeping formula of my own, and is pretty powerful; so don't take too much of it. Then drive back here after dark, and pick me up."

"What are you going to do?" I asked apprehensively.

"Never mind," he answered. "You know enough for the present. Now get going."

I had less trouble than I anticipated getting into the laboratory. The policeman on guard accepted my story that I had come for medicine for a sick dog,

and let me take what I wanted from the drug cupboard, as long as I made no effort to disturb anything else. I had a moment's uncertainty over preparing the second hypodermic, for Aloysius had not told me which end of the second shelf he meant. I finally decided upon the right end, and took down the bottle that stood there. Then I returned to the museum.

Aloysius was waiting for me behind a tree across the street. "I nearly got caught getting out," he said, climbing into the car. "The damned burglar alarm went off."

"Where to now?" I asked, releasing the brake.

He gave me an address. "It's Miss McGillicuddy's," he added.

WHILE I drove, he explained his plan. I was to get in to talk to Miss McGillicuddy on some pretext, while he remained hidden in the car. Then, when I had talked her off her guard, I was to plunge the second hypodermic into her arm. As soon as she had gone under, I was to snatch up Gussie, and dash back to the car. Aloysius would do the rest.

It sounded easy enough until I found myself standing on the doorstep facing Miss McGillicuddy.

"Well, what do you want?" she demanded uncompromisingly. Her iron jaw, when it moved, was overpoweringly suggestive of a cement mixer.

"Miss McGillicuddy," I began weakly, "I've got to speak to you about—about little Gussie. It's very important. May I come in?"

She moved aside reluctantly for me to enter. But the entrance was narrow, and she was a large woman; and, in that minute, I saw my chance. With a swiftness that surprised me myself, I plunged the hypodermic home. Miss McGillicuddy gave one startled snort, and wilted before my eyes.

Fighting down a feeling of panic, I

darted on into the house in search of Gussie. I found him without difficulty, and was back to the car and had handed him to Aloysius in the back seat in less than two minutes.

"Now," Aloysius cried triumphantly, "drive somewhere — anywhere — until this stuff takes effect! It acts quickly."

We dashed off at top speed, with Gussie yelling like an Indian on the back seat. We took the corner on two wheels, and almost collided with another car that was coming toward us. I heard the driver bawl a command at me to stop, but I paid no attention. There was no time to stand on ceremony just then.

But a moment later I heard an exclamation of dismay from Aloysius. "Divil an' all!" he gasped. "That was a police car, Eric, and they're following us!"

My only answer was to step on the gas.

I shall never forget that wild ride, although its details were, even at the time, a series of blurs to me. I remember vaguely crashing through two or three red lights, while the shrilling of police whistles all but deafened me. Gussie's yells made our progress as conspicuous as that of the fire chief; and to add to our confusion, shouts of, "Kidnapers!" began to arise from all sides.

At Aloysius' suggestion, I made for the open country; but when I passed the city limits, there were already three police cars and a whole squad of motorcycle police on our trail.

"If we can only hold out for an hour or two," Aloysius said, "we'll be all — Ow! Devil fly away with you!"

"What's wrong?" I demanded, wondering fearfully whether one of the police cars had opened fire, and Aloysius had been hit.

But his reply reassured me. "Gussie's cutting teeth," he answered. "The little fiend just bit me."

During the next hour Gussie's growth was phenomenal. By the time we crossed the State line, he had reached the obstreperous stage, and was trying to climb over the back of the seat to assist me at the wheel.

It had been a little past eight o'clock in the evening when Aloysius had injected the corrective serum. By six o'clock the next morning, it had completely taken effect, and, to our unbounded relief, Gussie was quite himself again, and with only a hazy memory of what had transpired in the interval. But now two new problems had arisen: The car was almost out of gas, and Gussie—except for the car's best blanket—was embarrassingly out of raiment.

"We'll have to stop at the next gasoline station," I told Aloysius. "We can do it in safety, for the police haven't followed us across the State line."

BUT I had reckoned without my radio. The keeper of the gasoline station glanced at our license, deliberately raised the hood of our car and did something to our spark plugs, and then walked calmly into his house and closed the door. Before we realized what was happening, two State troopers had appeared from nowhere and taken possession of us!

"It's all right," Aloysius reassured as we were herded into a police car to be taken back whence we had come. "We can produce Gussie now, so that will squash the murder charge; and as for the remarks about kidnaping, Gussie can prove that he was the baby by the mole on his left thigh. Miss McGillicuddy, the nurse, can identify it."

"Ye gods," exclaimed Gussie, aghast. "Did I have a nurse, and does she know about that?"

Returned to our home city, we told our story, individually and collectively, to a skeptical desk sergeant.

"A likely soundin' tale you be tellin'

me," he said. "I'm after thinkin' it's not Mr. Lindstrom alone that's had a second childhood, but all three of you; and I've a mind to put you all in the jug until you grow up."

Aloysius drew himself up. He can be impressive as well as persuasive when he tries. "Sergeant," he said, "I am a man of science, and what I tell you about the gland control serum is the truth. You must, at least, give us an opportunity to prove it by calling in the nurse, Miss McGillicuddy."

The sergeant was not unreasonable. He dispatched a man to summon our witness.

Fifteen minutes passed; then the telephone rang frantically. The sergeant took the call.

"My man O'Reilly's at the nurse's house," he announced tersely as he hung up. "He says something's happened to her, and he needs help. I'm going over there, and I'm takin' you birds along."

My heart sank. Aloysius had said that the sleeping formula was pretty powerful. Suppose I had given her too much, and—

Aloysius must have been thinking something of the same sort, for he whispered to me as we entered Miss McGillicuddy's residence; "Eric, tell me quick: From which bottle did you fill

that hypodermic? Right or left end of the shelf?"

"Right," I answered; and then, from his horrified expression, knew the worst: The bottle I had used had contained poison, and now Miss McGillicuddy was a stiffened corpse! What, I wondered, was the penalty in our State for manslaughter?

And then a voice from the room on our left spoke protectingly: "Nix, lady, lay off!" it was saying. "I'm a married man with a family!"

We rushed after the sergeant into the room beyond. And there a startling spectacle confronted us: Seated stiffly upon the edge of a chair was Officer O'Reilly, while perched coyly upon his knee—and very much alive—was Miss McGillicuddy! But not the Miss McGillicuddy we had known. Instead of an equine forty-odd, she was now a coltish twenty-one!

"O'Reilly, what's the meaning of this?" the sergeant roared; but I think he must have guessed even before he got the explanation.

Aloysius turned to me, and there was a look of mingled reproach and relief in his eyes.

"Eric, you're a blundering idiot!" he exclaimed. "But you've proven our story. You gave a shot of the gland serum to Miss McGillicuddy!"



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in time and space and memory.*

by NAT SCHACHNER

THE SPACE VESSEL was traveling swiftly. Behind it stretched the vast, frightening reaches of interstellar space. Before it, like a faint, far-off beacon in the insensate void, a small red star glowed markedly.

For over five thousand years they had voyaged on and on, steadily, ceaselessly, two hundred and fifty miles a second, eighty billion miles a year. Time had ceased to hold any meaning; space itself was an interminable nothingness in which they seemed suspended forever and ever. Only the cold, impersonal instruments, biting their records into indestructible drums, held the secret content of their mighty odyssey.

Five thousand years! A half millennium since they had departed in haste and disorder from the single, inhospitable planet that circled the vast majesty of Sirius and its tiny, infinitely heavy companion alike. An eternity in itself.

Out into space they fled, navigating with painful fumbling, growing old, procreating their kind, learning anew with blood and tears the expert secrets of space travel, accommodating themselves once more to the little world of their ancestors' contriving, the only home they, and uncounted generations before them, had known.

Five thousand years, in which they

lived and died and propagated; five thousand years without sight or sign of solid ground or the fresh, keen winds of heaven, without snow or rain or mountains or oceans. "Night" and "day" were words whose meanings were long forgotten.

They were born into a gleaming round of metal and the circumscribed depths of the eternal void, and ultimately were cast out through the ports to drift in frozen entombment, ghastly, distended corpses.

This was their world, their planet—this swift-traveling, yet seemingly motionless vessel. They knew no other, knew nothing of the wilder, freer life, except for tales distorted by the mists of time and many tellings, legends that smacked, perchance, of wish fulfillments for that earlier Golden Age of their ancestors.

BUT NOW, for the first time, since remote Sirius, the void was taking form and substance, was concentrated into that murky redness straight ahead. For years they had steered for that beckoning flare. And now it was a disk, tiny, it is true, but perceptible to the naked eye.

The forward telescope showed it to be a star of the second order, a moderate sun already past its prime and succumbing to slow, degenerative processes. But no matter how they searched, they found



Out in front there had been a lake—— It no longer existed!

no trace of satellites or swinging planets, solid bodies on which perchance they might find room and freedom and surcease from the frightening monotony of an endless space.

The denizens of the great ship crowded round the instruments. A low, repressed excitement pervaded their veins, made them restless, dissatisfied. Was here the paradise of the olden tales, or was it but another barren star, incapable of supporting life?

With low, soft words, more whipping than any lash, Warlo, their leader, drove them back to their forsaken tasks. Life had become well organized, blessedly routine. It must go on. Obediently they scattered, each to his work, but oppressed with strange longings, with swift side glances through transparent ports at the small dim star that hung redly in the void; welcoming them to—what?

They were strangely human, this voyaging race. Only their color betrayed their different origin: A warm, golden skin that held within its shimmering depths the sun-dappled sheen of ripe, golden limes. Features more delicate and more clearly etched, perhaps, than those given to the ruder mortals of the planet Earth.

Warlo, his tawny beard and high forehead granting him a nobility his slighter frame could not, turned wearily back to his instruments. On him devolved the management of the space ship, the government of its thousand-odd inhabitants. Their strangely remote ancestors had builded well. The long ellipsoid of still unruined, still unpitted metal was almost a mile from stem to stern, and half a mile in diameter at its widest point. It was a world in miniature, a closed cycle in which nothing was wasted, nothing dissipated.

The radiant walls still glowed as of old, though somewhat dimmer, and furnished light and the stimulating rays without which life cannot exist. One

half of the ship—toward the stern—held earth and loam—in which strange plants—succulent, nourishing—grew and flourished. Stranger animals, small but fat and tender, grew to maturity in crystal-enclosed runs, bred their young, and paid the eventual penalty for all toothsome, subordinate forms of life.

By careful, exact measuring a delicate balance was established between plant and animal, between carbon dioxide and oxygen, between warmth and cold. A delicate balance, that called for unceasing, unremitting attention on the part of the leader and his corps of scientists; a balance, that, once broken, would lead to irremediable disaster.

A YOUNG MAN and a young girl stood close to Warlo as he busied himself with his instruments. Their golden, chiseled features were smooth and unlined, and they resembled each other. They were brother and sister.

Rone, the young man, asked suddenly of Warlo. "Still no sign of an inhabitable planet, father?"

The old, tawny-bearded leader looked at him with somber eyes. "No sign even of a barren one, son," he said briefly, and became absorbed once more in his charts.

"But that would be terrible," breathed the girl, her eyes wide with concern. "It is our last chance in the universe. We could never survive another long passage to the next star." She stared out at the white majesty of Alpha Centauri, more awe-inspiring in its tremendous distance than the nearer murkiness of the approaching Sun. "Almost three thousand years away," she murmured with a shudder. "Another eternity! And the radioactivity of the ship's walls is fading with accelerating rapidity."

"Won't last another two hundred years," affirmed Rone with a shrug. "After that—well, it's a comfort at least to know we won't be here to see the final smash-up of the race of Mur."

"How can you talk like that?" the girl demanded indignantly. "What matter our puny selves! It's the tradition, the old glories of the race that count. To think that our ancestors created this, that for unaccounted thousands of years the race of Mur has known no other home but a tiny closure in space—for what? For a dream, a vision, an unconquerable desire that this race of ours, without a counterpart in the universe, shall once more root itself on a lordly planet fit for us, to seek new heights of unimaginable civilization. It must not, it shall not die!"

"Sorry, Banda," Rone replied. "But you yourself admit this is our last chance, and a pretty rotten chance at that."

Warlo surveyed his children with stern glance. Already their high-pitched voices had attracted attention. Curious ears from the farther end were straining. "Silence!" he commanded softly. "Only you and the council of scientists know that secret. The others must not know, now or later. They have not our fiber to carry on in spite of inevitable disaster." His beard was stiff and grim. "There must be planets around you faint star. There *must*!"

"We're still a year's journey away, and eighty billion miles," Rone broke in. "It is too far to be sure as yet. There might be a dozen and we would not know."

"Of course, my son," said Warlo.

"Suppose," Banda asked suddenly, "we find a proper planet. Suppose, however, that it is already inhabited with some form of intelligent life. What would we do in a case like that?"

"Not much chance." Rone grinned. "In all the legendary history of our race, there is no record of intelligent beings anywhere in the universe. The crystal hordes of Sirius were elemental, unhuman."

But Warlo said slowly. "I have considered that. In such an event, my

daughter, we shall exterminate them, and take possession of their planet for ourselves. There is no room in a single world for two ruling peoples. One must go."

"But that would be barbaric, cruel," Banda cried out in shocked tones. "Surely we have no right——"

"Speak not to me of *right*," her father thundered in his beard, so loud that his people stirred and reared their heads from their tasks. "We are the race of Mur, and we have searched for eons for a final resting place, a solid habitation in which to recreate the ancient glories of our race. Nothing must come between us and our goal—neither opposing peoples nor natural forces nor the soulless universe itself. We must, and by our eternal ancestors, we *shall* triumph!"

II.

NIGHT blurred the raw violences of the city of New York, made of its jagged outlines a thing fantastic, remote. Yellow lights pricked the dim loom of the upthrust buildings, vied in their exuberance with the cold, pale stars above.

Fifth Avenue and Forty-second Street, the crossroad of the world, was a roaring, surging tide of theater-going humanity. The public library was a squat monster, repository of the accumulated knowledge of the human race and the domicile as well of tattered derelicts, seeking its warm corridors against the outer cold.

Paul Mellish and Mark Sloan breasted the human tide with jesting words. They were in a hurry. The show was scheduled for eight thirty, and it was almost that now. Yet they savored the invisible breath of humanity, the raucous splendor of New York, with avid inhalations.

It was a long time since they had tasted civilization. Paul Mellish, in his forties, dark-faced and a bit well-fleshed, had just returned from the astronomical expedition that had established an ob-

servatory in equatorial Africa, on the frozen peak of the mountain of Kili-manjaro. He had been gone three years.

His companion, Mark Sloan, was younger and fairer of hair and skin, though burning desert suns had cast his features into bronzed leanness. He, too, had been in the far places of the Earth. He was an archaeologist, especially interested in tracking down all signs and remnants of the slightly fabulous continent of Lemuria.

Mellish sniffed deeply. "Give me," he quoted, "the tainted airs of New York, the effluvia of reeking humanity, and to the devil with tropic suns and 'antres vast and deserts idle.' Gosh, but I'm glad to be home, and for once forget what a telescope looks like."

Mark Sloan grinned. "I still hold for good old Lemuria, and the fabled Age of Gold. I'd exchange this sordid mess any day for that. But look, Paul. Even in materialistic New York you can't escape your vocation and pet aversion."

Mellish grunted. A little ahead, crowded against the railing of Bryant Park, was a sight familiar enough to the hardened inhabitants of New York—a long, silver, gleaming tube, balanced on a great tripod, its nose snouting in eternal search into the immutable heavens. It was an itinerant telescope, set up on the sidewalk, bearing its legend:

See Jupiter and its moons! See the Great Red Spot. Only a dime a look.

Above, aloofly unaware of such prying curiosity, soared the white splendor of the giant planet.

"Bah!" said Mellish. "A peep show, a titillation for the ignorant! Come on, Mark, we're late for our show. Lord! I haven't seen one in ages and ages."

But as they came abreast, some one was peering through—a woman, who had deposited her precious silver in the ascetic palm of the gentle and rather futile-looking attendant who squatted nightly before his beloved instrument.

Her head jerked up suddenly, and she stared with compressed lips at the commercial inviter to the stars. "It's a fake!" she exclaimed violently. "Trying to put things over on poor, unsuspecting people like that."

The frail old man shrank a bit from his customer. She was obviously not a woman to be trifled with.

"I—I don't understand you, madam," he quavered.

"Don't pretend ignorance," she said loudly. "Your silly old instrument is a fake. That ain't Jupiter; it ain't nothing. You pasted a picture on the glass, something long and narrow, pretending that's Jupiter. Look, you didn't have sense enough even to point it to the right spot. I want my dime back, you faker, or I'll call a policeman."

Sure enough, somehow the telescope had been jerked from its fixed position, was vainly scanning a totally different portion of the sky, barely clearing the sky-piercing tower of the Chrysler Building.

"I'm—I'm sorry," gasped the old man. "You must have kicked the tripod. Here—let me fix it for you."

But the woman—she was broad of beam and highly rouged—sniffed loudly. "I kicked it indeed. A pretty story. I suppose I pasted that picture inside, too. Like a silver egg, all shiny. Look!" she shrilled to her appreciative, rapidly growing audience. "There ain't any star up there, and he shows me an egg."

There were guffaws at that.

INVOLUNTARILY, the two men had paused in amusement to listen to the altercation. They, too, turned and stared. The sky above the Chrysler was innocent of planets or bright stars. Certainly, there were no eggs.

Flushed, embarrassed, the man fumbled for a dime, pressed it on the woman. "Here, please, go away!" Then his wasted hand reached for the polished

tube, to swing it back to its stance on Jupiter.

"Come on," said Mark, "we're late."

But Mellish had jerked away. "Hold that," he cried. "Don't touch it." Already he was shouldering his way through the crowd.

The owner of the telescope looked up in surprise, with a bit of fear, perhaps. "You're not the police, mister?" he quavered. "What that woman said isn't true. I—I'd never do such a thing. I'm a real astronomer. Look, I belong to the Association of——"

"Don't worry," said Mark. "I just want to see what she saw, or thought she saw. My name is Mellish, Paul Mellish."

The old man stared at him raptly. "Paul Mellish!" he whispered. "Of course I've heard of you. Why, certainly, you may look. It's an honor I never dreamed of."

But Mellish was not listening. Already his eye was glued to the eyepiece, his practiced hand making quick, expert adjustments on the focus.

Mark's hand was heavy on his shoulder. "We're missing the first act entirely," he protested. "A 'peep show,' eh? A 'titillation,' is it? A busman's holiday, you really meant."

Mellish was still not listening. A sharp exclamation had burst from his lips; his eye seemed to bore itself into the lens.

The poor telescope man fluttered about in a haze of adoration. The great Mellish himself—and in person—looking through *his* instrument.

Mark looked at his wrist watch with a resigned shrug. Just like an astronomer, he grinned wryly. The crowd had scattered, seeking new excitements.

"Well?" he asked after a decent interval.

Mellish lifted his head. His dark face was aflame. "By Heaven," he cried, "the lady was right!"

"You mean, it is a pasted fake?"

"No, you silly fool. It's a celestial object, in a place where none should be. And it's ellipsoidal in shape. A new asteroid, perhaps, of an unusual type, or——" He shook himself almost angrily. "But that's too absurd!"

"What's too absurd?" queried Mark.

Mellish did not answer. He was writing furiously in a little notebook the readings of the declination and hour circles attached to the telescope, jotting down the exact time from his watch.

"Sorry, old man," he muttered finally to Mark, "you'll have to take in that show alone. I've got to get over to Columbia. They have a pretty good instrument there."

MARK sat grimly through the last two acts of the light musical they had picked. Somehow the savor was gone.

After the show, Mark went to their hotel room. Mellish had not come in. But there was a telegram:

SORRY STOP THE COLUMBIA
INSTRUMENT WAS NOT POWER-
FUL ENOUGH STOP I'VE GONE
ON TO HARVARD BY NIGHT
PLANE STOP WILL KEEP YOU
ADVISED STOP PAUL MELLISH

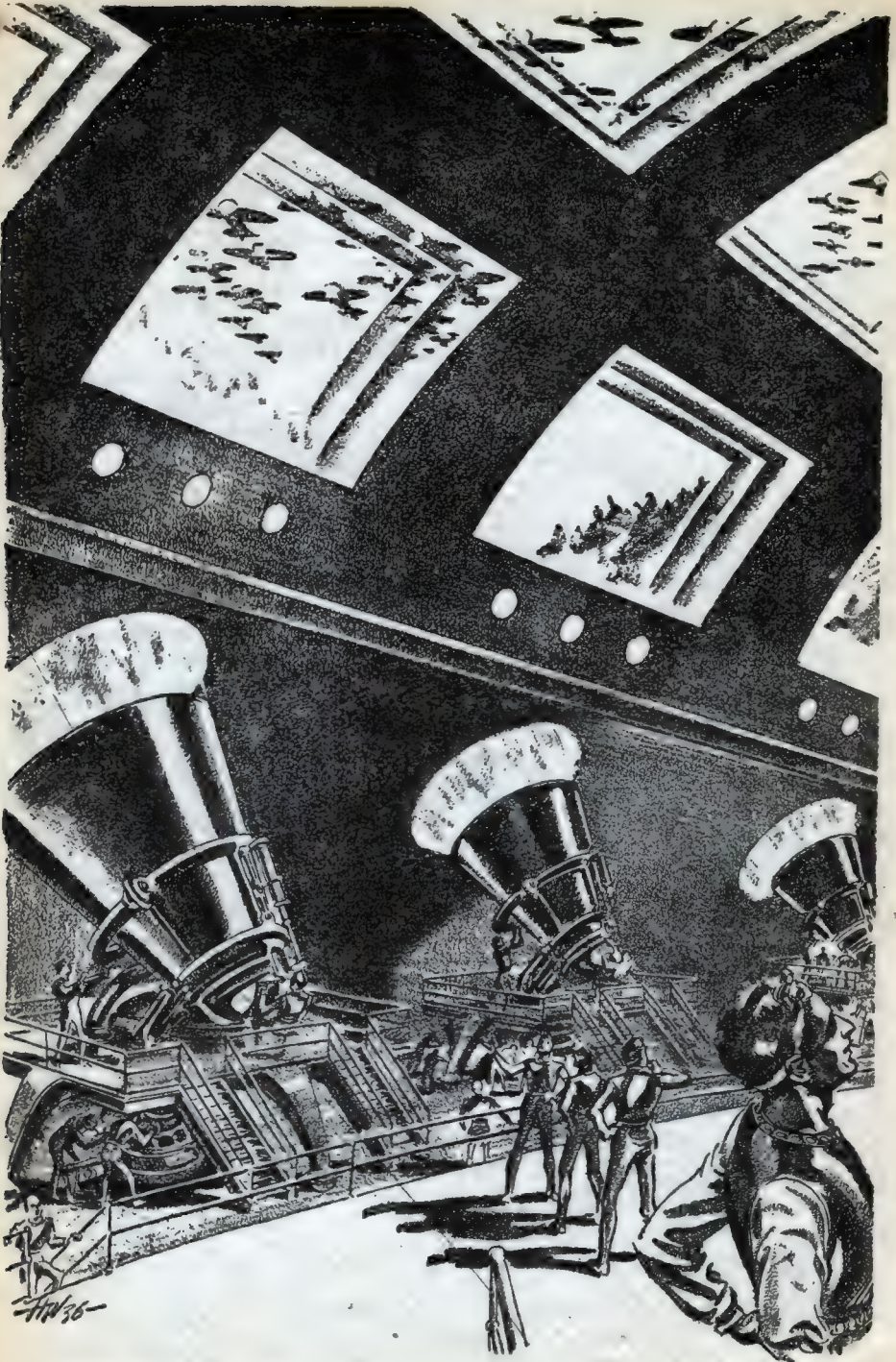
Mark Sloan drifted impatiently around town for two days, waiting. They had planned this vacation together by cable and wireless, and now—— He called the Harvard Observatory.

They were polite, but evasive. Yes, Paul Mellish had been there, but he was now on his way by plane to Mount Wilson, where there was the 100-inch Hooker reflector.

"But what in Heaven's name is it all about?" Mark exploded.

Sorry, but they really didn't know. And, perforce, he was compelled to hang up.

Well, he thought angrily to himself, Mellish isn't the only one who can go crazy on a vacation. He had a wealth of material in his trunk on the lost con-



Shafts of golden haze leaped from the funnels, impinging on the diving bombers—

THE RETURN OF THE MURIANS



Warlo raised his hand—and Mark swore, then cried out in mingled rage and astonishment—

continent of Lemuria. It would require a week of assorting and arranging. He had been too busy gathering specimens and data on his endless search to get around to it. A week, say, of utter retirement and quiet would do the trick—a certain remote lodge he knew in the Adirondacks, a summer camp, closed now. Its owner was a close friend.

It took a half hour to get wholehearted permission, another half hour to pack, and an hour later, a very determined young man, with trunk checked through, was on board the Montreal Express, roaring through the outskirts of New York.

III.

FOR A WEEK, Mark Sloan plunged into his work. The situation was ideal—a hunting lodge, fronting a wide lake, frozen solid almost to its shallow bottom, white with soft, new-fallen snow. Rolling mountains cupped them in, the only level stretch for fifty miles. It was solitary, remote. He was attended only by an elderly housekeeper who was taciturn and quite deaf.

Mark arranged his materials, went over his notes, studied his specimens in growing excitement. He forgot everything else, forgot even Paul Mellish. A picture was gradually piecing itself together—a picture of an ancient civilization, incredibly old, preglacial in time—the lost continent of Lemuria! There were little things he had found, worn and pitted by the passage of Heaven knew how many centuries, that only a high order of intelligence could have produced.

But one specimen in particular drew his fascinated attention—the broken, rough-edged remnant of a golden disk. He had dug it up on a tiny, unnamed islet in the Pacific—an islet that had not even been charted on the earlier maps. Perhaps some suboceanic convulsion that lifted it to the surface with

recent years. Such emergencies have been known to occur.

It was an intricately carved bit. There were configurations on it in no known language of Earth; there was the incised figure of a being, provocative, tantalizing, broken off at a point where form and meaning trembled on the verge of explanation. It was infuriating. Mark felt his breath come and go a bit faster every time he turned the time-worn plate over in his hand. The riddle seemed insoluble. He began writing out a report, based on his explorations. He knew he was dealing with a controversial topic—this lost civilization of Lemuria—that a storm would be aroused by his conclusions; but that made the game all the more fascinating.

So it was that he did not know what was going on in the outer world. He could not have been more removed had he been on the high plateau of the Gobi or in the white wastes of Antarctica. He had laid in a sufficient supply of food; and no one came to break the silent tenor of the days. Nor had he left any forwarding address.

How then was he to know what the veriest savage in a remote rubber station in the Congo was already aware of; what Tibetan lamas in their odorous lamaseries, Arabs in their black felt tents, Ethiopians resting on their arms, cowboys on dude ranches, men in the mines and men on relief, knew and hearkened to with various emotions?

The whole Earth was in a temblor of excitement. Newspapers screamed 120-point headlines, the radios had special announcements every fifteen minutes, cutting across sponsored programs with ruthless disregard for property rights, in order to promulgate to a gasping world the very latest reports. Every astronomical observatory in the world was a swirling focus of activity, every amateur trained his homemade instrument on the strange celestial visitant.

Paul Mellish had started it, and the

affair had grown from day to day until nothing else mattered. It was definitely established by now. It no longer required the great Mt. Wilson instrument to show the exact nature of the visitor from the skies. No longer could it be considered an asteroid, of strange shape and tiny size, following an eccentric orbit.

No! Even the Dyak in the Borneo jungle had heard what it was—a space ship, huge, ellipsoidal, driving at terrific speed from the vast unknown, heading directly for the planet Earth. Closer, closer, it came, while observers followed every second of its flashing flight, calculating, checking, wondering.

At first there had been enthusiasm, unbounded, optimistic. The imagination of mankind was fired. The dream of centuries had come true. Communication between the worlds! Interplanetary travel! Extraordinary civilizations on Mars, far in advance of our own! Of course, they were from Mars. Lowell had insisted on that; Schiaparelli had anticipated just the event.

Scientists, etymologists, went into huddles. Mathematical methods of communication were hurriedly puzzled out; mathematics, of course, must be a universal instrument. Nations prepared huge welcomes for the distinguished visitors; the mayors of prairie towns hurriedly ordered free keys to the non-existent gates of their anonymous communities.

BUT SOON the first flush died. It was pointed out that Mars was then looping around the other side of the Sun, as was every other outer planet of the solar system. The strange visitant was heading for us as the port of first call, as it were, straight from the unimaginable depths of interstellar space. The thought was frightening; the implications grew more and more on thoughtful minds.

Who could envisage the nature of

beings who must have traveled for thousands of Earth years? Where had they come from? What was their purpose? Grim men looked about at the parlous state of their own planet, where beings of similar type, indistinguishable from each other to other-world eyes, were yet hating and torturing and murdering each other with great gusto and ineradicable fury.

They considered the white man invading the continents of so-called savages, and imposing this civilization with horrible results; they contemplated the spectacle of man, the superior, devouring the flesh of cows and sheep and pigs; of the way of a wolf with a deer, of a fox with a chicken. All of them were life forms; all no doubt more closely akin than beings from Sirius or Antares with the denizens of Earth.

Fear and terror grew; both developed into overwhelming hysteria. Committees of welcome disbanded silently; orders for keys were cancelled. The dozen-odd wars between civilized man and his fellows were hurriedly patched up, racial distrusts, religious bigotries temporarily laid aside. A common peril faced them all—a peril all the more terrible because its very essence was unknown. Catastrophe approached the Earth, 200 miles per second, over 17,000,000 miles a day. In two days more it would strike!

The armies of the world quickly mobilized. Tanks limbered into action, battleships belched smoke, ready for sailing orders; bombing planes and waspish pursuits waited in serried ranks for the signal to take aloft.

Then, on the night of January 10th, with every telescope in the world trained on its hurtling progress, the great metal ellipsoid braked its speed, whined through resistant atmosphere, and arced in a smother of flame and cometary splendor over northern New York, to disappear from the sight of man.

A thousand photographic plates were

rushed to development; a thousand visual observations poured into central headquarters in New York. Parabolic arcs were plotted, sines and cosines rattled off nimble fingers. A red pin was stuck into a map. Orders flashed out on radio, sang through telephone and telegraph. Tanks lurched forward into the night; heavily laden airplanes zoomed and departed in squadrons; helmeted soldiers entrained. The armies and fleets of the world converged on the designated spot.

IV.

MARK SLOAN had just crept into his heavily blanketed bed. It was late and his senses were numbed from too much work. He had written a good deal that evening, fumbling on the track of explanations that didn't quite come off. He was tired; so almost immediately he fell asleep.

He was awakened somewhat later by what seemed an Earth-shaking cataclysm. He bounced out of bed to the thunder of screaming air, the blast of millions of pieces of artillery, followed almost immediately by a crashing, rending sound that caused the solid building to totter and sway. Outside, the frosty night was a sheet of blinding flame.

Somehow he dressed, hurtling into his clothes in seconds flat. Then he was racing through dark halls, catapulting through the door onto the log porch that fronted the lake.

He did not know it then, but the poor, elderly housekeeper was dead, already stiffening in her bed, the victim of a heart that had been unequal to the shock. As he shot out into the clear, cold air, he skidded to a halt with a cry of surprise.

Out in front there had been a lake, frozen to a depth of many feet. It no longer existed. In its place was a huge, unbelievable mass—an ellipsoid of metal, tremendous, impossible, filling the whole of the basin with its bulk, hiss-

ing, glowing with the impact of steaming ice and water on fire-hot flanks.

Even as Mark stared in stunned bewilderment, little sections in the sides opened silently, and dark, ungainly monsters rose straight up into the steamy exhalations, hovered in the air as if trying to get their bearings.

Mark shrank back instinctively, with the caution of a wild animal in the presence of the unknown; but it was too late. The aerial monsters had evidently seen him. Simultaneously, they darted down for him, with a swoosh of complaining atmosphere, caught him even as he tried to race back through the door he had just quitted.

Struggling, twisting vainly, he found himself lifted high into the frosty night, like a young lamb in the talons of an eagle. Consciousness left him——

WHEN HE CAME TO, it was to a queer nightmare sense of a long sleep in which his brain had been prodded and probed, in which impalpable energies had flowed unceasingly to grant him an awareness, a knowledge that had not been his before his capture. He struggled to his feet, dazed, bewildered. No one held him; his limbs were free and unfettered.

He seemed to be within an enormous arch of metal, a great flat dome that stretched interminably for tremendous distances. Everywhere was color and movement and ordered activity; machines that were totally incomprehensible; strange, growing things; an apparatus somewhat like a helmet attached by wires to a screen from which even now sound and symbols were slowly fading. It seemed to him, dimly, that the helmet had been clamped to his own aching head, that currents had flowed into his mind while he had slept. It was a world within a world, a tiny cosmos inclosed in the orbit of this monstrous structure.

THREE FIGURES stood immediately in front of him, watching him with patient eyes. Mark blinked suddenly. Was he dreaming or were they real? Had his brain suffered shock or the impact of a fractured skull, and were these the creatures of some incredible, delusive fantasy, the visions of another world and time?

Yet in shape and form they were human, albeit somewhat slighter in stature and more delicately molded of feature. It was their coloration, aside from the glitter and cut of metal-shimmering garments, that made them of another race than the denizens of Earth. They had warm, golden tint, curiously attractive, that made his own bronzed body seem somehow pallid and unhealthy.

The oldest had a tawny beard and high, bald forehead; his eyes were penetrating, yet disconcerting in their scrutiny, as if, thought Mark a bit uneasily, he, Mark Sloan, were a new species to be studied scientifically and catalogued.

The second was also male, a younger edition of the older, beardless and delicately smooth of face. His gaze was faintly amused, mocking even. But the third somehow caught Mark's breath, so that he had difficulty for the moment in his respiratory functions. She was obviously a girl, slender, yet subtly rounded. Her face was a perfect oval, the golden orange of her skin a miracle of tinting. She was indescribably beautiful, exotic.

"It is time that you awakened," said the bearded figure. "There is so much we must know from you, and quickly."

Mark started. Somehow he understood the liquid syllables, yet the language was not of Earth. He prided himself on his knowledge of the polyglot speech of mankind.

The young girl smiled. "You learned our tongue while you were asleep, oh man of this strange planet." She indicated the helmet with a nod of her head.

"It is the method we employ to teach our children. A succession of images and speech impinges on the receptive centers of the brain. It saves much time and trouble."

Mark collected himself with an effort. "But I do not understand," he protested. "Who are you? Where do you come from? What is the meaning of this huge structure, and why was I taken prisoner?"

"Softly," rebuked the old man. "We have no time for explanations. It is enough that we are the people of Mur, far wanderers in the universe, come at length to a planet that seems ideally fitted, from the hurried tests we have already made, for the colonization of our once glorious race."

Mark stiffened. "Colonization?" he echoed. "This planet is already inhabited. We have two billions of human beings like myself to crowd its surface. There is not much room for newcomers, unless"—and he looked doubtfully around at the people of Mur, who were moving with ordered efficiency along the spaced ports, shifting and tightening funnellike bits of apparatus into position—"you are but these few, and are willing to accept a restricted area for your colonization. In that case I am fairly certain our governments could make some provision for you."

The old man's golden, seamed face turned a hue of greenish mold. The strange syllables of his speech crackled and spat. "You forget, young man, that the children of Mur come not as humble suppliants to the obviously primitive denizens of your world. They come as masters, who have sought for countless thousands of years for such an haven as this. Our race is prolific, once the inhibitions of our confined quarters are removed, and they will people this universe-sent planet within a generation."

Mark restricted his growing anger with an effort. After all, he reflected,

he was a prisoner and subject to sudden death if he offended his captors.

So he only said. "And what, pray, do you intend to happen to the present luckless inhabitants, once your people of Mur spawn over the Earth?"

"Get rid of them; exterminate them," the old man answered promptly. "We are sufficient to ourselves. We require no lower order of beings for slaves."

"Father!" the girl burst out suddenly. "How can you talk that way? Our guest will think——"

"S-s-sh!" warned the young man uneasily.

But her father had heard, and the dull green of his features mottled. "Keep quiet, Banda!" he snapped. "What are you saying in your folly? This young native is no guest. He serves our purpose. When we are through——" He paused, but his silence was more eloquent than any further words.

MARK PALED. He could fill in the lacuna himself. Nevertheless he was grateful to Banda, the girl. Her magenta eyes showed compassion; her little fists were clenched with suppressed emotion.

He turned steadily to this ruthless bearded one, who had come from outer space. "You may kill me, if you wish," he said calmly, "but you will find me of no service in furthering your nefarious plans. Nor will you find your little war of extermination as simple and easy as you seem to think. You have here less than a thousand. We, the natives, are some two billion."

The bearded leader smiled. "They are as easily destroyed as a single one. We have weapons."

"So have we," Mark retorted. "Possibly we are as civilized as you. You have erred in accepting this rugged wilderness of ours, to which chance has led you, as a sample of our world *in toto*. You are wrong, as you shall soon see."

For the first time doubt, hesitation, showed on the Murian's face. "Weapons?" he repeated. "That is what you are to tell me. What manner of weapons have your people?"

Mark grinned and shook his head. "Enough to destroy you and all your kind," he answered confidently. He firmly believed in what he said—for how could this puny handful, even though they had mastered the secrets of space travel, overcome the massed might of the nations' armaments?

Yet somehow the thought gave him no exultation. In spite of their leader's declared intention of conquest and extermination, there was something strangely lofty and superior about him and his kind. Especially the girl, Banda, who, since her rebuke, had taken no further part in the conversation, but listened, with tight lips and sidelong glances, in a manner that left him no doubt where her sympathies lay.

The bearded Murian frowned. "What are they?" he insisted. "We have means of making you tell."

Mark looked him squarely in the face. "None of them will work. If you persist in your cruel adventure you will find out in due course, but not from me. My advice, given in all friendliness, is to take off from Earth once more and seek your home on Venus, where doubtless there is no inhabitant race; and where conditions should prove livable."

The Murian did not twitch a muscle. "Rone, my son," he said calmly to the young man at his side, "take this stubborn primitive to the dissector chamber for scientific examination."

"No, no!" Banda threw herself forward, in between her brother and the stranger captive. "Rone! Warlo, my father, you must not! Don't you see? He is right, this native. He is brave—and civilized, even as we. We are interlopers, invaders. They had lived and cultivated their planet since time began. Let us take his advice, seek this



Then with every telescope in the world trained on it, the great metal ellipsoid braked its speed and arced in a smother of flame and cometary splendor over northern New York.

other, uninhabited world of which he speaks. Please, father!"

Warlo looked impassively at his pleading daughter. Without raising his voice, he repeated. "Rone, take him to the dissector chamber."

Mark tensed his lithe frame desperately. He'd be damned if he'd go. Rather fight and die here, than in that place of which the girl seemed in such horror. Rone moved toward him, his face as impassive as his father's, but his greenish eyes were filled with queer reluctance. Mark balanced on his toes, ready to leap with fists flailing.

V.

BANDA'S CRY held them all in moveless tableau. "Father, look! Those machines!"

All eyes swerved to a gray metal plate. It had illumined suddenly, was glowing with depthless space. Within its seemingly dissolved interior the outer world was visible; sky and snow-capped mountains and the Adirondack wilderness. The air was filled with great, droning planes, the roar of their motors plain to be heard—huge bombers, heavily laden, flying in perfect formation, each bearing on its underwing the painted American flag.

A thrill of pride and exultation coursed through Mark. His brave countrymen were coming to the rescue, speeding to the defense of a world endangered by the appearance of this strange visitant from space.

"Now you shall see what the Earth men are capable of," he boasted somewhat vaingloriously. It did not matter that he would also die in the inevitable salvo of indiscriminating bombs. His life was cheaply sold for the salvation of Earth. But the girl! Without quite knowing why he felt this way, he added rapidly and in a whisper. "You had better run for it, Banda. Get out of this ship and as far up the mountain as

you can before they begin to bombard us."

Her violet eyes flashed as she raised her slight body to its fullest height. "I am not afraid of death, oh stranger. Nor is any Murian. Nor do we fear the weapons of a barbaric race."

Mark moved back, deeply offended. He had meant well; yet she had lashed at him with scornful, superior speech. He'd be damned if he'd lift another finger to help her, the snooty, overbearing—

He grinned suddenly. After all, she and he were in the same boat. Danger, the exigencies of the occasion, had brought a narrow patriotism, a pride of race, to the foreground. In the war of opposing civilizations, of strange races, culture, wisdom, calm judgments, all went by the board. Only the primitive passions remained, the bitter desire to hurt, to kill.

Warlo studied the fast, roaring bombers with inscrutable eyes. "Flying machines," he remarked finally, as if to himself, "crude in construction, inefficient, but nevertheless the product of some inventiveness. Your people, young primitive, have advanced somewhat along the road of knowledge. Well, we shall soon see."

He issued calm orders. Rone moved swiftly off. The swarming denizens of the space ship took positions at the queer, funnel-shaped machines at the ports. The metallic surface of the hull cracked with lambent fires, sheathed in blue flame.

OVERHEAD the great armada circled in a long, sweeping round. A plane detached itself from the rest, dived and came skillfully to a landing, not far from the partly submerged behemoth.

A pilot emerged, khaki-clad, pistol in hand. Behind him, covering his advance, were the shouts of machine guns. He came up to the frightening bulk of the vessel, *unafraid*, arrogant. Mark

watched him through the transparent side port, breathless, admiring.

The aviator lifted his voice. "Hello in there, man, beast, or whatever you may be! In the name of the United States of America I order you to come forth and give an account of yourself."

Warlo asked blankly. "What did he say?"

Mark interpreted. "He is the representative of my nation," he explained. "He wishes to know who you are, and what you wish."

"Tell him," answered the Murian, "we are the new masters of his planet. If he and his fellows surrender peaceably, perhaps we may find some inconspicuous portion of this world where, in our mercy, we may grant them lodging. If they resist, we shall exterminate them all, root and branch. Speak into the metal plate."

Mark did so. He could see the violent start of the American aviator as his voice reached him through the hull, the look of amazement on his weathered face.

"I'm Mark Sloan, a prisoner in the ship," Mark said in English. "These people have voyaged from outer space, and they intend to take over Earth for themselves, and exterminate the human race. I don't know just what weapons they have, but they seem confident of their ability to do so. For Heaven's sake, radio your fleet commander to bomb us out of existence at once, without any further parleying or notice. A sudden attack may do the trick."

"Well, I'll be damned," exploded the American, moving warily back. "So that's their idea, eh? We'll blow the idiots to kingdom come. But say, how about you? You'll be killed, too."

"Don't mind me," Mark urged. "Quick! There's no time to lose. They're getting suspicious."

Outside, the flier saluted his invisible compatriot. "O. K., Mark Sloan! I'll remember the name." The aviator's

hand went behind his back in surreptitious signal. Sparks crackled bluely from the plane's aerial. Then he turned, raced back to his ship, clambered in. In seconds it was zooming upward, at an angle to escape the oncoming bombs.

Mark turned to find Warlo's eyes fixed on him. There seemed a glint of amusement in them. "Young Mark Sloan," he said surprisingly, "you and your kind are not as savage and inferior as I had first thought. There are certain elements of nobility, even in your rather primitive brains."

Mark stared. "You understood what we said?" he exclaimed.

"Of course. While you slept and learned the language of Mur, I availed myself of the opportunity to learn reciprocally your halting, inadequate tongue. I wished merely to study the reactions of your people; that is why I pretended ignorance."

"It doesn't matter," Mark exulted. Through overhead transparencies he saw the massed bombers, the gaping of trip hatches, the tiny black spheres accelerating by the hundreds, straight for the huge bulk of the space ship. "In seconds you'll be wiped out, bag and baggage." In his excitement he spoke English. "Behold the end of Mur, who thought to conquer Earth."

Warlo smiled. He did not seem perturbed at the sight of those tiny globes. How could he know what powerful explosives were contained in those innocuous-seeming pellets?—Mark thought, watching in breathless fascination the onrush of the bombs. In another instant, dissolution, death, the end of everything!

CLOSER, closer! Now! Involuntarily he closed his eyes, braced himself for the annihilating roar. Nothing happened! He opened his eyes, dazed, to see Warlo's irritating smile, Banda's gaze wide on him. He looked up incredulously.

The bombs were gone. In their place, hovering over the metal skin and its lambent, sparkling fires, were little puffs of smoke. The powerful explosives had been dissipated harmlessly by the protective sheath of electrical energy.

Warlo raised his hand. The Murians at the funnels barely moved. But shafts of golden haze leaped from the funnels, impinged on the diving bombers. Mark cried out and swore in mingled rage and astonishment.

The hurtling squadron, scores on scores of huge, armored planes, shimmered an instant in the innocent-seeming haze, then vanished. Once more the sky was blue and clear overhead. But the great armada was gone, and left no trace.

"Your weapons, my young hot-head," remarked Warlo, "are a bit crude compared to those of Mur, as you may have observed. Your race has evidently not yet learned the secret of synchronized vibrations, that hurl electrons out of their energy states and scatter them in space."

"Damn you! Damn you!" Mark swore recklessly. More than a thousand of his own kind had been obliterated in that act. Rone's delicate mouth mocked him wordlessly; but Banda's gaze was full of pity and deep understanding—

VI.

IT IS NOT the purpose of this history to detail the thronging and cataclysmic events of the next few weeks. That has been done, and better, in the learned and voluminous accounts of the historiographers.

Suffice to say that the American nation, hearing of the catastrophe from the lone surviving plane of the messenger, girded its loins grimly, and sent wave on wave of planes, tanks, heavy artillery, all the armament of modern warfare, against the invader. Nor were

they alone in their unrelenting efforts. The nations of the world cooperated for the first time in human history, drawn to a common brotherhood by the common menace.

But, alas, no Earthly weapon could penetrate that web of force, so fragile seeming in its shimmering tenuity, yet so unbelievably repellent against Big Bertha shells, flame throwers, reckless, suicidal tanks alike. And time and again, those thin, vaporous, golden rays darted out and wiped out, in one huge vanishment, men and guns and tanks and planes and rocks.

During all this time Mark Sloan continued a prisoner. There was no escape possible. It was a strange relationship that gradually evolved between himself and his captors, the Murians. He should have loathed them, burned with a fierce ardor for their immediate destruction. Had they not already slain huge numbers of the people of Earth? Was it not their avowed purpose to take over and repopulate the planet?

One part of his being did so respond. But there was another side, the scientist in him, yes, even the philosopher. The invaders were without doubt superior in civilization and knowledge to the Earthmen. An unwilling admiration grew on him for these Murians as he learned to know them better; as he argued and reasoned with Rone and the others.

In calm, dispassionate moments he could even understand their point of view. Put human beings in like circumstances on Mars, for instance, and they would do even as the Murians. The strange saga of their long voyagings through the universe fascinated him, the misty story of their vague point of origin stirred strange echoes within him.

They, too, from Warlo down, receded from their original contempt for Mark and his fellows to an awareness of certain potentialities in the human race.

The reckless, unremitting courage with which new armies hurled themselves to certain destruction aroused their admiration.

Finally they yielded a point to Mark's persistent arguments. They established a neutral zone of one hundred miles around their still immovable vessel. Beyond that they would harm no human for the while, provided no attempt was made to penetrate the forbidden area. It was Mark who radioed the terms of the truce to a desperate world. He bade them take courage. Perhaps, he said, he might prevail upon the invaders to—

Warlo smiled at this broadcast, but said nothing. Mark turned wearily back to the Murians to resume his interminable pleas. There was Warlo and the council, grim, tawny bearded beings, to convince. Nor did he seem to make any headway against their patient, but logically implacable reasoning. But he had two converts: Banda and her brother Rone.

They seconded his pleas, enabled him to obtain another short respite for his harried people when the first truce expired. Unfortunately, they were youngsters in the eyes of the council, and of little weight.

ONE DAY in council session, tired, weary of the futility of his reiterated pleadings, Mark absent-mindedly thrust his hand into his pocket, to feel something hard and jagged. Idly, without knowing what he did, he took it out, turned it over and over in his hand, while he pursued his arguments with the frozen-faced elders.

Banda's excited voice broke into the conference. "Father!" she cried sharply. "See what Mark Sloan has in his hand—your symbol of authority."

Mark, immersed in his emotions, stared stupidly up for the moment. The phlegmatic Murians had jerked to their feet, their golden faces flaming with

fury. Even Banda's features were stricken, as at a sacrilege committed.

"Kill the thief! Slay the false Earthman!" Cries of rage, of passion, arose on every side.

Warlo thrust himself forward. His face was a terrible, set mask. His hand was out. "Give me that, oh viper that we have permitted to live too long," he lashed. "Almost, your cozening tongue has persuaded me, but now——"

Mark was astounded. What was the matter with the Murians? He had never seen them act this way before. "I don't understand," he stammered, unwittingly clutching the tarnished half disk in his hand. "What have I done?"

"Done!" thundered Warlo. "In your madness you have stolen the sacred disk of our ancestors, the one link we have—mutilated though it be—to that ancient Golden Age of Mur, when we were a mighty civilization, rooted to a great planet—before that ineffable day when the few escaped from the impending, unknown doom."

Mark unclutched his hand, stared at the golden, time-worn plate with its strange, un-Earthlike characters and the partial figure of a god. He had dropped it into his pocket that night while working on his thesis, and had forgotten about it since.

A great light burst upon him, so dazzling in its implications that everything else swept into oblivion. By Heavens, it must be so! Mur—Lemuria! The strange characters on the disk, the seated half god, golden, delicate of form. The strange legend of the space wanderers. It all tied up.

He rose, towered over his accusers. "Warlo," he snapped, "I have discovered your secret. It is unbelievable. This that I have is not yours; it never was. You still have your sacred emblem. Look for it and you shall see I speak true words. This is its other half, its counterpart, broken from its mate uncounted eons ago, when Mur, or Le-

muria, was a mighty nation. I found this, here on Earth, on this planet. Welcome home, sons of Lemuria, to your ancient abode."

No longer were there thoughts of decorum, of position of superior to inferior. The Murians crowded around like little children. A messenger was hastily dispatched to find the sacred symbol. All through their voyagings they had clung to it, their last link with ancient glories. All other records had been lost, abandoned on the iron planet of Sirius.

When the mutilated disk was brought, and tremblingly fitted to the one that Mark possessed, there was pandemonium. For thousands of years they had wandered through the universe, knowing no home but their ship, and now fate had brought them back to the planet their remote forefathers had quitted—and it was unaccountably still intact.

MARK tried to explain that. Lemuria had lived and flourished before the ice age! It had actually sunk beneath the waves and been completely destroyed. Ice and floods and geologic

convulsions all pointed to some tremendous catastrophe—a disaster that didn't quite come off, as expected. The Murians had no records to disclose its nature.

Perhaps, Mark argued, some wandering body had come from uncharted space, had swung close to the Sun and its attendant planets. Perhaps all calculations showed an ultimate crash and extinction. Something went wrong. The sidereal visitor sheered and went on its way, leaving a convulsed Earth behind, but not annihilation. Nevertheless, the remaining population of Lemuria had sunk into the ocean, and only stray fragments of their passing were left to puzzle the archæologists.

The disk had been worshiped, no doubt, as a sacred thing. When a portion of the race cast off into the unknown, they had broken the symbol in two, so that the adventurers might also have with them the sacrosanct token, even as Greek colonists much later were to carry fire from the sacred hearth of the mother city.

"And now," queried Mark, after the excitement of discovery had died somewhat, "what do you intend to do, Warlo?



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Earth is the home of your ancestors, and we, its present people, are in some measure your cousins, descendants of a common stock. Surely you do not wish now to exterminate us as aliens, as the natives of a strange planet. Let me take it up with the peoples of Earth. I am certain some method can be devised for your settling on a reasonably large tract of land. Perhaps in Africa, perhaps in——" He fumbled in his mind, seeking unsettled areas.

Warlo smiled. "There are many objections. I see you are doubtful about the scheme yourself. We have been cooped up too long; we require more space for the unfolding of our culture than there is available in peace and decency on this planet.

"Furthermore, I am afraid we have awakened certain hatreds by the slaughter of Earth's peoples that could never be forgotten. And then, too, I have sensed that there is not much amicability among your own kind; that they are as ready to spring at each other's throats, as at ours. If they should ever discover the secret of our web of force and our orange ray, I am afraid much harm might be done."

"Then what will you do?" Mark demanded with a sinking heart.

Warlo looked at him gravely. "I think," he said slowly, "we shall avail ourselves of your suggestion. We take off to-night for the planet Venus. Our instruments disclose beneath its outer cloak of clouds a proper atmosphere, land and water in abundance. The Murians will have room to spread, to evoke once more the ancient glories. As for you, Mark Sloan, deliver our message to your people. They need fear us no longer. You are free to go."

A wave of exultation swept over the young archæologist. Earth was saved, and he had been instrumental in the doing. He was free, *free* again!

Then he saw Banda. Her lovely, delicate face was turned to him; her eyes were pools of strange meaning.

He took a deep breath, faced Warlo and the council of elders. His voice was quiet, conversational. "With your permission I should like to join the Murians in their new venture on Venus," he said. "We can radio your message to Earth, and I, alone, possess the records of your history."

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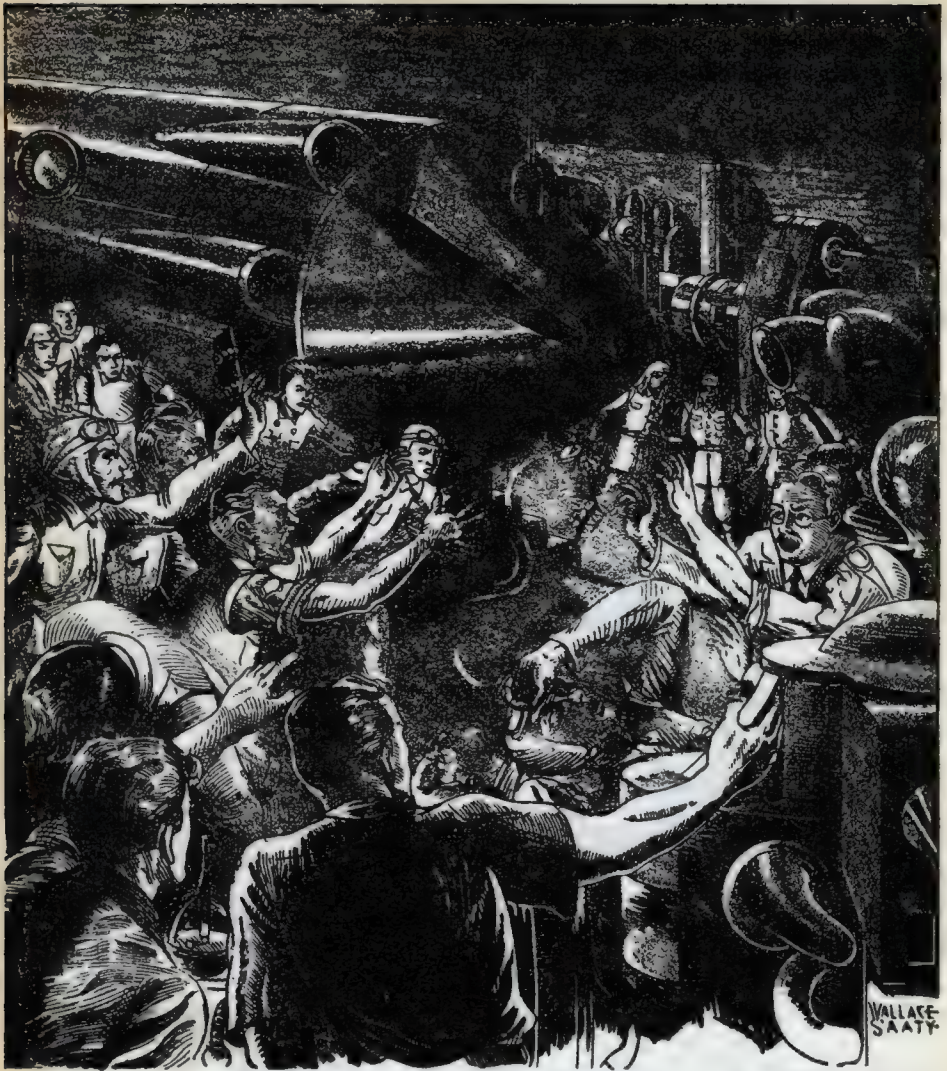
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The Scarab

Surprise—and the fiendish elusiveness of their foe—were their undoing.

by Raymond Z. Gallun

THE MESSAGE sped through the ether at 7:40 p. m., Eastern Standard Time. At 7:43 the Scarab crept out on a window ledge of the room topping a tall building popularly known as the N. J. House.

The Scarab paused on its perch for a moment, as if to determine for itself whether it was perfectly fit for action. It was a tiny thing, scarcely more than an inch and a half in length. The fancy of the craftsman who had made it, had

given to the Scarab the form of the beetle after which it was named. But its body had a metallic sheen, and its vitals were far more intricate than those of the finest watch.

The Scarab rubbed its hind legs together, as flies will do when at rest. Then, apparently satisfied that it was in condition, it unfolded the coleopterallike plates over its wings. With a buzz that any uninformed person would have mistaken for that of a beetle, it started out on its journey.

There were only two who observed its departure. Both were in the uppermost chamber of the N. J. House. One was a hard-faced fellow who watched the Scarab with keen interest; the other was a slight, wizened chap, whose legs were off at the knee. The latter sat in a wheel chair before a white screen, beneath which were many strange instruments, levers, and buttons.

The pair conversed in low tones, making frequent mention of Dr. Clyde Allison, best-known scientist of the year, 1947. Their features were gaunt with strain.

But the Scarab itself betrayed no evidence of any emotional upset. The nervous quickness of its movements spoke only of swift, smooth efficiency.

It dipped in its flight; and its quartz-lensed eyes took in the scene below. There was unusual activity in the city streets. Crowds of people, drawn suddenly from work and amusement alike, stared fearfully at the evening sky. Lights winked with a suggestion of feverish tension.

There were excited shouts and cries detectable to the sensitive, microphonic ears of the Scarab. The noise of traffic was a steady roar. Stubby, waspish ships patrolled the air; and on the ground, in park and plaza, gleaming, high-angle guns were already being wheeled into position.

The Scarab's inspection of these preparations, was brief but intense. No

one saw the tiny, metal fabrication; or if they did they thought it only a large, vagrant insect. But the Scarab possessed more than an insect's powers. Steeply, and at terrific speed, it arose, until it reached the cold, unresistant texture of the stratosphere. There it straightened out and tore southward, the minute motor that drove its purring wings drawing its energy from the same wireless power plants which supplied most of the larger mechanisms, on the ground and in the air.

A HALF HOUR WENT BY. The miles reeled past beneath, far more rapidly than the fleeting minutes. The distant, cloud-flecked terrain was gray and blurred in the thickening dusk; for all lights in the cities and villages had now been extinguished as a precautionary measure.

But at last the Scarab approached a place around which a faint, golden halo clung. The little mechanism plummeted down toward the spot. The phenomenon which covered it, was like a huge, inverted funnel of witch fire, brewed in the caldron of science. Beneath its enveloping luminescence was a hill, shaggy with dense woods and undergrowth. Above the tops of the trees a blunt, metal-capped tower projected. From this cap the lethal halo originated, playing downward like a spray of a fountain to meet an encircling ring of basal electrodes on the ground.

Swift pursuit planes and bombers swung in wide arcs about the hill. Every now and then one or several of them would attempt to fly over the fiery cone; but slender beams of the same texture as the protecting halo itself, would grope toward them, and they would either turn back in hasty retreat or they would be drawn by the mysterious attraction of the beams, and pulled to crashing destruction in the forest. Though the Scarab did not see any ship touch the halo, it was safe to as-

sume that its end would have been of a similar nature in such an event.

Around the hill there was evidence of other activities. Machine guns and light cannons were mounted there, their muzzles pointed toward the bizarrely flaming citadel. Men in olive uniforms crouched in the shadows. Swift tanks waited in concealed positions.

But this U. S. army unit was powerless to advance. Its members had learned their lesson. The same beams of attractive force which rendered the aircraft of no use, checkmated their every move. Those beams could tear the vitals from a man, and could so warp and twist even the heaviest machine, that it was unable to function.

The Scarab, however, did not hesitate. It was far too small to be noticed, or even seen, by either the mysterious defenders of the citadel, or by those that besieged it. Besides, the Scarab was not hampered by several other limitations which size imposes.

It flashed downward, coming to rest well ahead of the position of the besiegers. Thence it scrambled forward toward a point midway between two of the huge rods, or basal electrodes, which were mounted on the ground, helping to maintain the ethereal cone of fire which covered the hill. But this phosphorescent curtain was not quite complete. At its bottom, between the basal electrodes, were low gaps, bowing upward slightly, like flattened arches.

IT WAS through one of these gaps that the Scarab negotiated an easy entrance to the strange, substanceless fortification. The little mechanism crept past a pair of gray-uniformed guards who stood, glassy-eyed, close to a large tripod-mounted cylinder from which the attraction beam could be hurled. But these guards remained unaware of the presence of the tiny intruder.

Once more the Scarab took to its wings, flitting and buzzing erratically to-

ward the tower. It landed close to the stone walls of the structure.

About it, as it scrambled forward, were weeds and bushes and grass, which, from its miniature point of view, constituted a thick and threatening jungle. Once a field mouse, that had somehow acclimated itself to the fearful happenings that were going on around it, scampered across the Scarab's path. A few moments later a large, vicious-looking beetle barred the way, its chitinous mandibles opening and closing suggestively.

Under other, more leisurely circumstances the Scarab might have met this challenge with combat, as it had often done on other occasions, for the amusement of its now distant master; but there was no time for such byplay in this fascinating Tom Thumb world now.

Its every sense alert, the Scarab continued forward. Now it crept up the smooth face of the tower wall. Its eyes, gleaming in the eerie glow of the cone canopy above, were searching for a means of ingress. Presently a small, square window, slightly raised for ventilation, caught its attention. Several seconds later it was inside the building.

The whirl of machinery, and the sound of voices beckoned the Scarab to descend a spiral runway whose walls were lined with heavy cables. And so the little mechanism flitted its erratic course downward, through the half light afforded by small neon bulbs.

It traversed a power room where gigantic Diesels spun generators of similar dimensions. Evidently the present master of this citadel had made himself independent of the public wireless energy, which would put him too much at the mercy of the people, if he used it, since it could be shut off at any time. And though such action would cause vast inconvenience and the crippling of civic defenses, there was still the possibility that it might be done, if circumstances to warrant it arose.

PRESENTLY the Scarab reached a broad, low-ceilinged chamber, far enough below the surface to be completely immune to even the heaviest artillery fire. The place seemed to combine the features of a factory, laboratory, and hangar. It was brilliantly illumined.

Against one wall a score of rakish planes stood in a row. They were rocket planes, independent of all outside sources of energy. Each was equipped with spraying devices for the propagation of lethal gases, and each was fitted at its nose with both a pair of machine guns, and a small cylinder for the projection of the attraction beam. There was a wide, upslanting tunnel, obviously intended as an exit for the aircraft. It was to be presumed that during their return from a sally, the deadly halo around the tower and hill above could be turned off briefly; and since their helicopters allowed them to make perfect spot landings, there was little danger of their being damaged while coming to earth in rough country.

Quite unnoticed, as before, the Scarab buzzed into the great workroom as any intruding insect might, and sought the further security of a shadowed corner.

Carefully it studied its surroundings, the brilliant, analytical mind, far away now, that heard through its ear microphones, and saw by means of its synthetic vision, keenly active.

At the center of the room stood a craft such as had never yet flown in the atmosphere of the earth. It was a smooth, black cylinder, tapered at either end. There were electrodlike rods at both of its extremities, and there were several ports and an air lock on its visible side. Otherwise, nothing of its structure or principle was apparent. But somehow its waspishness suggested colossal speed, and fiendish capacities for destruction.

The weird vessel seemed very near completion, if, in fact, it was not yet

actually ready for flight. A number of men were busy removing from around it the metal supports which formed its cradle. All of those men's faces were blankly expressionless, and their eyes looked glazed and fixed.

It was the same with all but one of the other occupants of the room—there must have been fifty in all. At a workbench, bending over some papers and blue prints, was a man whom any school child would have recognized. He was Dr. Clyde Allison. But his fine old face and blue eyes were as blank as those of the assistants who crowded around him.

NEAR BY, twenty men clad in flying togs were lined up, each with a forearm bared. They stared rigidly ahead, like antique idols. Only the mystery who commanded them, moved. His small body was clad in a white smock; and he strode from one of the fliers to the next, jabbing the needle of a hypodermic syringe into the arm of each.

In appearance, he was not the kind of fellow one would expect him to be. His hair was white, and was cut like that of some nineteenth-century musician. His eyes were large and clear, and there were no wrinkles in his pink, smooth face.

But when he had finished his task with the fliers, he spoke; and that revealed more of his quality than anything else could.

"Attention, all!" he barked in a deep, commanding voice.

Like marionettes, every one in the room, including Dr. Allison, turned toward their chief.

"I am desperate," the latter went on. "That is to say that you are all desperate, for my will is your will, and my desires are your desires. I have made it so. Periodically I have injected into your blood streams a drug which renders you far more than normally sus-

ceptible to hypnotic suggestion.

"I tell you this to impress permanently and indelibly into your minds the unalterable fact that for now, and always, every one present is, and shall be, part of me. This has been so for four months, ever since I came here to Dr. Allison's laboratory, and, with certain rough persuasions, induced him to submit to an injection of the drug I invented. You were all his helpers then; and naturally you obeyed him when, after he had yielded entirely to my will, he ordered you to submit to the drug; for you trusted him, and he told you that the substance was harmless.

"And you are not sorry that you obeyed him; rather, you are very glad; for you have all taken part in a great achievement. Your every thought and act has been in sympathy with mine. Dr. Allison's great scientific genius has become my property and yours; and it has produced miracles. It has given us new gaseous poisons, far more deadly than any known before; it has given us the attraction beam; and, most important of all, it has revealed to us, at last, the means by which the atom can be made to yield up its energy. Thus Clyde Allison's most magnificent goal, the object of a lifetime of toil, has at last been reached.

"We have duped the world for a long time. By being careful we have made people believe that all was as usual here. But several days ago some spying officials became suspicious, and so we are in danger. The only thing to do is to be bold.

"We need radium. We need it, not as a fuel for the engines of the marvelous ship we have built, but as a catalyzer that will enable us to release energy from the atoms that compose water, or sand, or ordinary earth, within those engines. We have demanded, in a message to the United States some minutes ago, that all available radium be de-

livered to us at once; we have promised severe punishment if our request is ignored.

"There is some danger that what we have asked for shall be refused us. But in that event we must be hard; for our present position is unpleasant, and our future is at stake.

"ONCE we have sufficient radium, we can demand from civilization all that we could wish for. For then our ships will fly with the speed of meteors, and will thus be invulnerable to attack. For weapons it will have atomic blasts, against which no force, not similarly equipped, could ever stand. Those weapons shall enable us to compel obedience to my will—to our will. We shall have the world power we crave. But, at present, with nothing but the half gram of radium which we used as a catalyzer in small test engines and blast tubes, we are still the potential pawns of chance.

"I speak to you all; but in particular I speak to you who are pilots of the planes. I know that your loyalty to our cause will be severely tried if it happens that you must fly forth to fulfill our promise of vengeance in case delivery of the radium is refused us. And so I have administered to you pilots a precautionary overdose of the suggestive-receptivity drug.

"I am sorry that if we must take drastic action you will have to use things so comparatively crude as planes and lethal gases to carry out our purpose. But, even so, these rocket-powered ships are half again as swift as any aircraft employed for military use by the United States. And there is not the remotest doubt of the superior effectiveness of our vaporous poisons. Though your numbers are few, the havoc you can bring about should be appalling. The attraction beams will also provide you with a big advantage. I believe that if

we must, we can change refusal to agreement without much delay.

"Perhaps some of you will die. But remember that death is little, and that our will and object is the only thing that should concern us. Remember, too, that the name of Boris Kolin is the name of your god. Do you all understand?"

Like obedient puppets the pilots nodded. "We understand, Boris Kolin!" they intoned.

And the other men in the room, Dr. Allison among them, nodded in the same mechanical way, and uttered the same words of submission.

"It is well," said Boris Kolin. "And now I shall remind the people of this fair country of ours that they have been imposed upon—insistently!"

He moved toward a radio microphone. Swift fingers set the transmitter in operation.

"Citizens of the United States," Kolin said, "it is now 8:25 p. m., Eastern Standard Time. At 7:40 I made a request that all available radium in the country be brought to Dr. Clyde Allison's laboratory. No answer to this request has yet been made. In fifteen minutes the hour which I granted you to decide upon an affirmative or negative reply shall have passed.

"Is any amount of radium worth a million human lives? I assure you that I am well able to account for that many of my enemies, if I make a sudden aerial attack on any one, or several, of the larger cities. My planes are the swiftest that exist; my weapons were invented by Clyde Allison himself. The effectiveness of an assault upon a densely populated metropolis, even when it is gallantly defended, is well known. That is all. I await your decision."

Kolin snapped off the transmitter. He turned now to the receiver, an unholy smile twitching on his pink, childlike face. But his hands never touched the switches of the receiver.

THE MIND that controlled the Scarab had seen and heard enough. Now it decided that the moment in which to act had come.

With a whirl, the Scarab shot from the concealing shadows of the corner where it had hidden itself. Its aim was true. It struck the back of Kolin's pink neck; and for a fraction of a second it clung there, its metal mandibles biting deep into flesh. A tiny part of a drop of liquid was injected into its victim's blood stream. That liquid was less subtle, though far more potent, than the renegade scientist's suggestion-receptivity drug.

Kolin's smile changed to a look of idiotic surprise. He gave a thick cry and dropped to the floor. For several hours he would remain in a coma, before the effects of the devilish stuff wore off.

Pandemonium followed, as the Scarab sought to put all of Kolin's hypnotized subjects, present in the room, out of action. Those men did not think of retreat; but surprise, and the fiendish elusiveness and quickness of their minute foe, was their undoing. With arms flailing, they sought to bring the Scarab down; but one by one instead, they fell into the same deep sleep which had conquered their master. Twice the Scarab was caught in closed hands that tried to crush its vitals. But those hands received, instead, a sharp bite, and the numbing, liquid caress of unconsciousness.

At last all was still in the great workshop.

The Scarab alighted momentarily on the breast of Dr. Allison, to see if the noted scientist was seriously injured. But he was not; he was only senseless like his companions. And like them he would recover. The effects of Kolin's drug would wear off, too, and the doctor would be himself again. His genius and his achievements were not lost.

The Scarab darted toward the spiral

runway. There were still the defenders outside the citadel to be disposed of; but since they could not number more than a dozen, and since each pair of them, operating one of the several attraction-beam projectors, could be approached singly and stealthily, the task should not be difficult.

With the defenders out of action, the besieging soldiery beyond could be depended upon to break down several of the basal electrodes necessary to maintain the cone of golden light, with artillery fire. And it would be simple to choose from among the innocent captives, the one that was guilty.

IT WAS 8:43 p. m. in the topmost room of the N. J. House, more properly known as the National Justice Building.

The wizened little man leaned back wearily and triumphantly in his wheel chair. He drew his hands away from the complicated maze of levers and buttons before him. Those levers and buttons were the controls of the distant Scarab. By means of them, through a system of radio impulses, the intricate and tiny robot could be guided and directed. That radiovision screen there, still portraying a wild though satisfying view, pictured what the Scarab's eyes beheld. That speaker, supported in a mahogany box, reproduced the sounds heard by the Scarab's microphonic ears.

"Well, Chet," said the cripple with a grin, "am I still as good a government man as you are, or am I just a once-was?"

Chet Schroeder's hard features had softened a bit. In fact they still looked a little silly with chagrin.

"I never said you were a once-was, Nick," he complained. "So you can cut the sarcasm. But say! This is pretty swell! This little dinkus of yours can go anywhere! It can even crawl through a knot hole, and nobody'd know the difference! And you run no risk at all!

How'd you happen to invent the thing anyway?"

Nick Shipley turned his rueful gaze toward the pathetic stumps which had once been his knees. He shrugged.

"I didn't," he said. "No dumb detective like me ever could put together a thing as complicated as the Scarab. But I'm responsible for its invention in a way. The time I chased that crooked Ezmund guy up into the Rockies in winter time, and got gangrene in a pair of frozen feet, was the beginning.

"A fella can't just sit around, you know. And so I got to thinkin' that if I had a little radio-controlled robot to do my crook chasin' for me— Well, anyway, I wrote a letter to our good friend, Dr. Clyde Allison, explaining my situation, and putting a bug in his ear.

"After a while the Scarab and all the controls and stuff that go with it, were delivered here, and I got the job of skipper. That was about eight months ago, before Doc Allison ever heard of Kolin. Now, when there's a really hard piece of detectin' to do, it's usually assigned to me."

"Then Allison was saved by his own invention!" Chet Schroeder exclaimed.

"Yep!" Nick answered. "But you're supposed to keep quiet about all this, you understand. Most of the government dicks don't even know about the Scarab. Sometime soon I hope to take you on a hunting trip through the land of Lilliput, via my little pet. I hope you've got a good heart, because some of the insect monsters you're gonna see are liable to scare you plenty. And now we'd better shut up for a few seconds. I've got to start the Scarab back home to roost."

Nick Shipley leaned forward. Keys and levers moved under his flying fingers; and in his eyes there was a look of adventurous ecstasy.

Black Light

by Ralph Milne Farley



"Duck, Mr. President—quick!"

THE PRESIDENT received the sandy-haired G-man in the blue room of the White House.

"Curtis," said he, with his engaging smile, "as you know, American relations are very strained with a certain foreign power, whose name I need not mention. We have just received word from the army intelligence service that spies of that power have entered this

country for the purpose of making an attempt on my life. I understand that you fellows of the bureau of investigation are great believers in what you call 'occupational disguise'?"

"Yes, sir."

"And that you yourself are a reserve officer?"

"Yes, sir. Captain of infantry."

"Very well, Captain Curtis. I have

arranged with your chief to give you a leave of absence. You will be called to active duty as a reserve officer, and will be detailed to the technical staff. Please obtain ordinance insignia and report back here in uniform for instructions. Your duty will be to act secretly as my bodyguard."

Walter Curtis drew himself up to attention; his steel-gray eyes snapped as he saluted briskly. "Yes, sir," he replied.

SURROUNDED by an escort of motor-cycle police, and preceded and followed by cars containing plain-clothes men of the secret service, the President's sedan drew up in front of a large white-pillared, colonial, brick house in the suburbs of Georgetown. The President, the secretary of war, Colonel Forster of the technical staff and Captain Walter Curtis, got out and ascended the broad front steps.

They were met in the doorway by a tall well-built gentleman with frowzy, iron-gray hair and bushy, black eyebrows, whom Colonel Forster introduced as Professor Woodward.

Rubbing his hands ingratiatingly, the professor escorted them inside. "Before we pass on to my laboratory," he said, "I want you to glance at this painting." He indicated a haying scene, hanging over the Sheraton wall table in the front hall; and proudly added, "I painted it myself."

There seemed to be nothing extraordinarily artistic about the picture, but all the guests politely murmured a half-hearted appreciation.

Professor Woodward raised his bushy eyebrows; his black eyes glittered. Picking up two pairs of horn-rimmed spectacles from the wall table, he handed one of them to the President, with the suggestion, "Now look at it through this, excellency."

Some sixth sense caused Walter Curtis to prick up his ears.

The President put on the glasses, peered through them at the painting. Then he exclaimed, "Why, the hay and the hayers are gone! It's an *autumn* scene now! The fields are brown, and the trees are all orange and red!"

He alternately removed and replaced the spectacles several times, comparing the effect; then he handed them to the secretary of war.

As the others tried them in turn, Professor Woodward gave the President the second set, dryly remarking, "These spectacles will show you the same scene in *winter*: snow and purple shadows."

"How do you do it?" asked the President in admiring tones, as he removed the second pair of glasses, and smiled engagingly at his host.

The professor smiled back. "Very simple," he explained. "The normal human eyes sees only one octave out of all the infinite range of the spectrum; just as though we could hear only one octave of the piano. But I have devised pigments which, although invisible to unassisted eyesight, nevertheless produce all the different colors of the octave above human vision; also the octave below.

"This picture is really three different pictures: painted once with ordinary paints, once with infra-red paints, and once with ultra-violet paints. Each of these pairs of eyeglasses shifts the wearer's color perception one octave; thus, the first pair renders infra-red colors visible, and the second pair renders ultra-violet colors visible. Simple, isn't it?"

"Simple?" breathed the President. "It's marvelous!"

Every one else chorused, "Ah!"

Professor Woodward continued: "I showed you this picture first, because I believe that it will render more understandable what you are to see in my laboratory. Gentlemen, kindly step this way." And he led the party through

some doors and down a hallway toward the rear of the house.

Opening a door into a small room, he apologetically asserted, "I am afraid that there isn't room in here for any but the principals. Excellency, would you mind leaving your guards outside?"

"Certainly not." The President beamed.

Then he, the secretary of war, and the two army officers entered the little room.

Professor Woodward closed the door with a click. The room was bare except for a small table, an electrical switchboard on the wall, and a large naval searchlight standing in one corner.

Colonel Forster explained in a whisper to Walter Curtis: "*That's* the device which gained him decorations from practically every Allied government in the World War, and membership in the British Royal Academy!"

THE PROFESSOR began his explanation: "That is the black-light searchlight, which safeguarded our troop ships against the German submarines. Its rays are ultra-violet, and hence invisible. A submarine would come to the surface alongside a totally dark Allied vessel; and, believing itself unobserved, would methodically get ready to loose a torpedo. Little did the Germans realize that one of these searchlights was playing full upon them."

"But what good did it do, if the rays were invisible?" asked Captain Curtis.

"Ah! You forget the spectacles which you wore in my front hall. Every bit of aiming and laying apparatus of the guns of your ships was equipped with lenses like those through which you looked at the winter scene. To your gunners, the submarine was a blaze of glory. And so, before the torpedo could be launched, a five-inch shell would blow the enemy out of the water. Now I will demonstrate."

"I hope that you do not plan to blow us all out of the water," said the President jocularly; every one laughed.

The professor took a pair of spectacles from his pocket and put them on. Then he moved over to the panel and closed a large double-leaf switch. A motor-generator set clicked, then hummed into action. Next he snapped out the lights. The lens of the searchlight glowed an eerie faint lavender, but otherwise the room was a dense blackness.

"You can tell when you are in the beams of the searchlight," the professor explained, "by looking into a mirror, for the ultra-violet light causes your eyeballs to fluoresce with a faint, greenish luminescence." He chuckled recollectively. "I used to tell folks to watch for the reflection of the teeth. Teeth are even more luminescent than eyeballs. But imagine my embarrassment when the late Sir Oliver Lodge sidled all the way across this room, mirror in hand, without any reaction! I found out afterward that his teeth were false."

A general laugh went up at this anecdote. Then Woodward let each member of the party sidle across the laboratory, holding a little hand mirror, in order to observe the phenomenon of the flashing eyeballs. G-man Curtis, being the junior in rank of those present, was the last to try this.

Then each one, in turn, put on the professor's spectacles. It was amazing how this suddenly transformed the path of the beam of the searchlight from dense blackness to a blaze of light!

Curtis still had the small hand mirror when he donned the magic glasses. Instinctively he held the mirror out into the ray, and attempted to reflect the light back onto some other part of the room. But it would not reflect!

"Ah, captain," observed their host, "I am glad that you tried that, for it suggests another point of interest about

the black light. An *ordinary* mirror will not reflect it. But now try this mirror here." He groped in the darkness on the top of the table, picked up a square of shiny substance, and handed it to the G-man.

Curtis held it in the glare of the searchlight, and found that he was now able to flash the light back, as though it had been sunlight. Then he took off the spectacles and gave them to the professor.

A STRANGE CHANGE came into the voice of Professor Woodward—a certain tenseness and raise in pitch—as he declaimed, "And now, gentlemen, I have the glasses on again, and you have not. I can see all of you, and none of you can see me. The door is locked!" He paused momentarily, to let that thought sink in. Then he concluded dramatically, "And now, as you value your lives, let nobody move! I am going to shoot the President."

Four simultaneous gasps echoed through the little laboratory. And then Walter Curtis acted!

He still held the mirror which *would* reflect ultra-violet light. Thrusting it, with his left hand, in the darkness, into where he knew the invisible ray of the searchlight to be, he threw the invisible reflection in the direction from which the words had come.

Two green eyes glowed at him out of the darkness—then blinked shut.

Curtis held the mirror steady, for he realized that, with that blinding glare shining through the octave-shifting

lenses, the professor would be unable to see his intended victim.

"Duck, Mr. President!" he shouted. "He can't see you now." Then he reached for the .45 automatic which hung on his belt.

The two green eyes blinked open again; and from some distance beneath them came the flash and roar of a revolver. The mirror in Curtis' left hand splintered to pieces.

But a split second later, Curtis' own weapon roared back, aimed squarely between those two phosphorescent spots.

The dull thud of a falling body. Then silence. Then insistent pounding on the door, and the sound of running feet outside.

Curtis groped to the switch panel, snapped on the lights.

The professor lay on the floor, a stream of blood oozing out from beneath his face, his glasses lying near by, and one outflung hand clutching a smoking revolver. No one else was even scratched.

More pounding on the door. The secretary of war sprang to put his arms around the President. Shakily, Colonel Forster unlocked the door; in barged the secret service detail, weapons drawn.

Meanwhile, Walter Curtis was down on his knees beside the dead body. He turned it over—and the iron-gray mop of hair came off! It was only a wig.

"Your foreign spy, Mr. President," he reported.

They found the real Professor Woodward trussed up and with mouth taped, in one of the bedrooms.

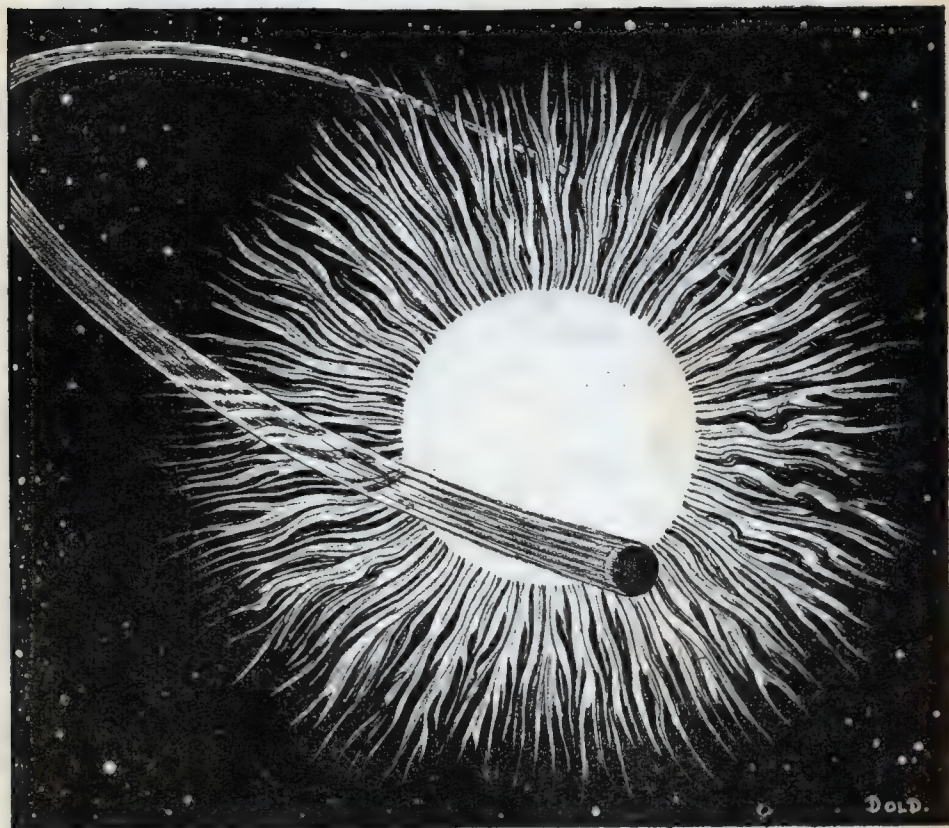
DESERTED UNIVERSE

by John Russell Fearn

will appear in the September issue of

ASTOUNDING STORIES

Article Number 3—in a series which embraces the entire Solar System



MERCURY

by John W.
Campbell, Jr.

INCREASING ACCURACY was the bugaboo of theories in astronomy. Kepler's law showed the Sun always to be found at one of the two foci of the elliptical orbits of the planets. And Newton, but a few years later, showed *why* the Sun was to be found there. Gravity! The motivating principle of the universe was discovered. In a year—astronomers considered Newton's theories precisely as clear as the mud of the Thames Basin—with the

mud having a bit of an edge, perhaps.

There was no wild rush to apply Newton's laws—partly because, though astronomy is a mathematical science, in applying his laws Newton had invented a complete new system of mathematics he claimed wonderfully useful. The astronomers decided this calculus of Newton's worked on the principle that zero multiplied by infinity is anything you want.

Not only that, but while Newton's

gravitational theory would solve the position of any two bodies, and the theory itself was good enough, there wasn't, and isn't yet, a mathematics that would handle three simultaneously—and the astronomers sadly pointed out that they had seven planets, one Sun, nearly a dozen Moons, and lots of showy—and so far as they knew then, massive—comets to deal with. "Thank you kindly," decided the Astronomer's Guild in general, "we've already had enough."

They used it though, the leaders among them, and simplified the methods. They generally realized that though there were a lot of bodies in the system, when you stacked the whole raft of planets—Moons, comets and what not—against the Sun, they didn't count. The combined planets rolled into a lump, with the comets and meteors added in, would not equal one thousandth the mass of the utterly incomprehensibly huge Sun. Further, those other things were so spread out that their effects didn't amount to much because of lack of teamwork.

The Sun's effect is so absolutely, unquestionable paramount that they got practically correct answers by using it alone in their calculations. But, by considering first the Sun, then the next nearest planet, then the next, and so on, as the second of the two bodies they *could* handle, they got results progressively more and more accurate.

Then it began to dawn on them what a terrific method of analysis Newton had given them. They pried secret after secret from the heavens with it as a lever; more and more rapidly they advanced. They knew *why* the orbits were as they were, not only why the planets go around the Sun on their invisible wires, but why the whole, bent-wire loop circled very slowly about the Sun.

You can't tell whether a circle is spinning around its center or not, because it is featureless, but an ellipse—and an elliptical orbit therefore—has two more

or less pointed ends, readily distinguishable. If the Earth and the Sun were alone in space, the Earth would follow a single track, forever repeated, a single ellipse about the Sun. But it isn't; there is Mars quite near, and farther out there is Jupiter, with its tremendous mass. Beyond there is more matter, and all of it affects Earth a bit, to the extent that the whole orbit itself moves slowly about the Sun.

When this was discovered and accounted for, the astronomers were naturally pleased. But one very small gadfly still buzzed unpleasantly, for they hadn't perfectly accounted for the fact that Mercury's orbit advanced quite so rapidly. They thought that there might be another undiscovered planet causing this perturbation. They thought that better telescopes might show it to be merely an error, for it was a very small quantity.

Better telescopes did not eliminate it; they outlined it in brighter and better light; they pinned it down to very sharp limits. They did succeed in eliminating another planet interior to Mercury, though. And Mercury still advanced some 40 seconds of arc per century. They could get that with immense accuracy—because Mercury, being nearer the Sun than Earth, transits the solar disk occasionally, giving in effect a line of sight not the length of the telescope tube but a full ninety million miles long! And Mercury did *not* comply with the law of gravity!

BY THIS TIME—it was about 1890—the astronomers were sure of Newton's laws, and they knew that they could not be wholly wrong, for they had explained too many things. But evidently they did not need correction; just a very slight error existed.

So Mercury's orbit gave the first and oldest proof of the correctness of Einstein's new modification of the law of gravity. Curiously, Newton's law is ex-

act on Earth—but inapplicable on Mercury. Mercury is Einstein's world—a world so close to the immense mass of the Sun that the laws of Nature we know do not apply.

Space—a curious sort of physical space that is not empty, but rather to be thought of as an invisible, impalpable, but indubitably present sort of thing—is distorted, its very nature changed under the colossal strain of the Sun's gravity. Space is a real thing, but not a substance; it is as real and tangible as a magnetic field, and quite as transparently invisible. The space I shall refer to generally is this sort of space—not emptiness alone, but the stuff a magnetic field is woven of.

On Mercury, basic laws we know would need modification. The power of two magnets would not be the same, the attraction between two electric charges changed. They would not obey the laws of normal space, for the Sun has changed those laws.

But Mercury is a weird world. Almost exactly three thousand miles in diameter—so small beside the enormous bulk of its primary and so near—it gave up all struggle ages since, and waves listlessly at the bidding of its master. Always the same region faces the Sun, as nearly as it may, its rotation relative to the Sun dragged to a halt by the mighty tidal strains and friction the Sun sets up, over the two thousand millions of years it has circled there. Once in 88 days it makes one circuit of the Sun—one year. Once in 88 days it turns on its axis. Thus it keeps always the same face to the Sun.

A simple way to demonstrate that this is necessary: Face the center of a round table, standing up beside it. Walk around it completely, always facing the center of the table, and just keep in mind as you make the circuit a doorway, a chair, or some exterior object. When you have made the circuit of the table, think back and you will realize

that progressively you faced the doorway, had it on your left, then directly behind you, on your right, and wound up facing it again.

But because its orbit is not a circle, Mercury cannot face the Sun exactly. To illustrate this, take the old table illustration, and, instead of walking around the edge of the table, walk half around it close in, then go off at a tangent to some distance, finally walking back to the table on the other side to complete the circuit.

If you turned around your own body axis at a constant rate, you couldn't face the table all the time, since it took, say, four times as long to walk off at a tangent and back as to do the remainder of the orbit. You did half the circuit of the table in a fifth of the total time, so, though you turned around once in one circuit of the table, turning at a constant rate you couldn't face the table all the time.

MERCURY'S ORBIT is not this extreme, though its distance from the Sun varies by several millions of miles—nearly seven, in fact. This shifting of the exposed face due to eccentricity of its elliptical orbit is called libration.

The Moon faces Earth in much the same way as Mercury faces the Sun, and similarly has slight librations.

In the case of Mercury, the libration is about 23 degrees, or about equal in amount to the tilt of Earth's axis, and produces what poor seasons Mercury has, as Earth's axial tilt produces ours.

But where our seasons vary from north to south, Mercury's vary from east to west. Since the libration is 23.7 degrees each side, there is a total of about 47 degrees, or more than an eighth of the planet's surface affected. As a result, only 133 degrees are permanently dark.

But what horrendous summers Mercury has! With a minimum distance from the Sun as low as 29,000,000 miles

—less than one third the distance Earth enjoys—poor Mercury receives nine times the heat. (Since radiation intensity falls off as the square of the distance increases.) Further, Earth is a cloud-wrapped planet, but Mercury is light—so light that the surface gravity is only about a quarter that of Earth.

Hot gases tend to expand, and with the Sun pulling, pulling forever so close by, the gases of Mercury's atmosphere expanded away and left the planet—unless some faint trace remains forever frozen on the incredibly bleak, dark side. For while the Sunward side registers a temperature of 650 degrees Fahrenheit, the dark side is close to the utter cold of space—absolute zero, say 400 degrees below Fahrenheit zero.

On the Sunward side, lead, tin, sodium, potassium, gallium, and, of course, mercury, would run in puddles; metals would all be liquid. Water vanished eons ago. Mercury is a planet-size annealing oven, maintained at a steady furnace temperature by the furiously incandescent Sun looming in its jetlike airless sky nine times as large as we see it.

Whatever frightful contortions of utterly dark, jagged rock the frozen dark side may exhibit, unweathered by wind-blown sand where there is no wind, unworn by rain where there has been no water in a thousand million years, uncracked by repeated frost, since frost there is not repeated, but a thing enduring all time, we can guess what the Sunward side looks like.

We stand on a vast, rolling plain of grayish dust, drooping swiftly over the near horizon of a tiny world. The enormous Sun shines bluer in its airless sky of black, with flames two hundred thousand miles tall licking slowly out into space, vast scarlet tongues that leap out with an apparent slow majesty, though they move a hundred miles a second. It hangs motionless in the sky, apparently, while even near it the stars

are visible for all its searing brilliance. There is no flying dust, no scattering air to spread its light into hazing brightness.

Clearly, near stars are visible, but they writhe and move visibly as the Sun creeps slowly through them, seeming to bend and sway to his coming. Einstein's world, where starlight bends visibly in the immense distortion of the Sun's fields of force! Even light has mass, and, passing near the gravitational arms of the Sun, is drawn aside.

On that vast plain straight lines are not straight; there are no lines. The mass of the Sun is near, and draws the straightness and the possibility of straightness out of space. Space—the space of magnetic fields—bends under the pull like an immense beam stressed near its breaking point, and even on Mercury we can detect that un-Earthliness, that unnormal curvature.

There are no racked, jagged rocks here. The Sun has seen to that, too. In that oven heat the rocks we know would crumble to dust in a week. Gypsum rock contains water—water of crystallization. That would go first. Many rocks contain this chemically combined water, and fall to dust without it. What refused to yield to this age-long baking would yield yet to the lashing radiation that expanded them swiftly at the surface, so that they cracked in flaky dust.

It might take time; but the Sun is not, and never has been, in a hurry. It took perhaps a billion years to stop the struggling rotation of the little planet to a dead following of the blazing sun. Then for another billion years it has chipped at the rocks with its hammer of lashing radiation and the chisel of brief cooling as the Sun swung momentarily some 47 degrees from the vertical, so the slanting rays were less fierce.

AIRLESS, utterly waterless, heated to furnace heat on one side, and chilled to the cold of space on the other, Mer-

cury is dead forever. When the Sun itself dies at length, nothing can return the air, the water that might bring life to Mercury again. And then it would be too late; for if the planet were endowed now with water and air, in a month it would be found frozen on the cold side, for there it could deposit to remain undisturbed. But Mercury has no store there, for once it rotated, and long ages before it ceased rotating it lost every trace of gaseous stuff.

We can see Mercury easily. Only two things in the heavens are brighter than that planet: Venus and the great sun Sirius, discounting, of course, the Sun and Moon. But Mercury, so close in fact to the sun, is never more than 28 degrees of an arc from it in our sky, visible thus only at dawn and dusk.

Curiously, astronomers find full daylight the best available time for observing Mercury. The surface has never been seen under good conditions; for if we observe at twilight or dawn, the planet is so low on the horizon we must look through hundreds of extra miles of air, due to the long slant our line of sight makes through the atmosphere. All this air wavers and moves with heat and cold; it is hazy with dust and mist

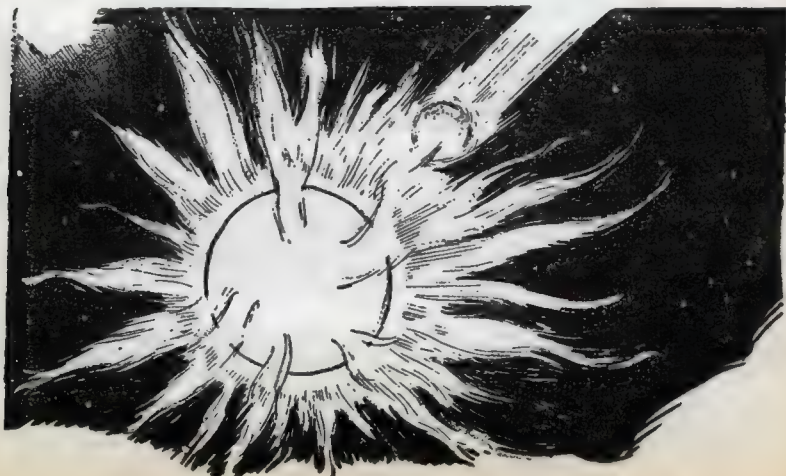
—so the astronomer finds daylight, with Mercury directly overhead, a better time to observe.

Mercury is bright only because it is so near the Sun, receiving such enormous floods of light, and because it is never more than 130,000,000 miles from us, at times less than 55,000,000 miles as both Earth and Mercury are on the same side of the Sun.

Mercury's dead, dull surface of gray dust is not highly reflective, expressed astronomically by saying its albedo is low. It cannot be seen when nearest the Earth, of course, because then Earth, Mercury and the Sun are in almost a straight line, and the dark surface is near us.

Since the plane of Mercury's orbit is at a slight angle to the plane of Earth's, they do not line up exactly each time; if they did, we would have a transit of Mercury about four times a year, and be able to see it as a minute, black dot on the face of the Sun. Actually, they occur in a series at 7, 13, and 46 years, then starting over again. The next will be on May 10th of next year. But it will take special equipment to see this black carcass of a dead planet across the Sun's incandescent disk.

Next Month: Venus



PROTEUS ISLAND

*A Novel from the pen of one
of the most outstanding figures
in science-fiction.*

by STANLEY G. WEINBAUM

*Proteus Island was taboo—and he
saw why. No two things were alike.*

THE BROWN MAORI in the bow of the outrigger stared hard at Austin Island slowly swimming nearer; then he twisted to fix his anxious brown eyes on Carver. "Taboo!" he exclaimed. "Taboo! *Aussitan* taboo!"

Carver regarded him without change of expression. He lifted his gaze to the island. With an air of sullen brooding the Maori returned to his stroke. The second Polynesian threw the zoölogist a pleading look.

"Taboo," he said. "*Aussitan* taboo!"

The white man studied him briefly, but said nothing. The soft brown eyes fell and the two bent to their work. But as Carver stared eagerly shoreward there was a mute, significant exchange between the natives.

The proa slid over green combers toward the foam-skirted island, then began to sheer off as if reluctant to approach. Carver's jaw squared. "*Malloa*! Put in, you chocolate pig. Put in, do you hear?"

He looked again at the land. Austin Island was not traditionally sacred, but these natives had a fear of it for some reason. It was not the concern of a zoölogist to discover why. The island was uninhabited and had been charted only recently. He noted the fern for-

ests ahead, like those of New Zealand, the kauri pine and dammar—dark wood hills, a curve of white beach, and between them a moving dot—an *apteryx mantelli*, thought Carver—a kiwi.

The proa worked cautiously shoreward.

"Taboo," Malloa kept whispering. "Him plenty *bunyip*!"

"Hope there is," the white man grunted. "I'd hate to go back to Jameston and the others at Macquarie without at least one little *bunyip*, or anyway a ghost or a fairy." He grinned. "*Bunyip* Carveris. Not bad, eh? Look good in natural-history books, with pictures."

On the approaching beach the kiwi scuttled for the forest—if it *was* a kiwi after all. It looked queer, somehow, and Carver squinted after it. Of course, it had to be an *apteryx*; these islands of the New Zealand group were too deficient in fauna for it to be anything else. One variety of dog, one sort of rat, and two species of bat—that covered the mammalian life of New Zealand.

Of course, there were the imported cats, pigs and rabbits that ran wild on the North and Middle Islands, but not here. Not on the Aucklands, not on Macquarie, least of all here on Austin, out in the lonely sea between Macquarie and the desolate Balleny Islands, far



She faced him fearfully—yet defiantly—and there was puzzled questioning in her face.

down on the edge of Antarctica. No; the scuttling dot *must* have been a kiwi.

THE CRAFT GROUNDED. Kolu, in the bow, leaped like a brown flash to the beach and drew the proa above the gentle inwash of the waves. Carver stood up and stepped out, then paused sharply at a moan from Malloa in the stern.

"See!" he gulped. "The trees, wahi! The *bunyip* trees!"

Carver followed his pointing figure. The trees—what about them? There they were beyond the beach as they had fringed the sands of Macquarie and of the Aucklands. Then he frowned. He was no botanist; that was Halburton's field, back with Jameson and the *Fortune* at Macquarie Island. He was a zoölogist, aware only generally of the variations of flora. Yet he frowned.

The trees *were* vaguely queer. In the distance they had resembled the giant ferns and towering kauri pine that one would expect. Yet here, close at hand, they had a different aspect—not a markedly different one, it is true, but none the less, a strangeness. The kauri pines were not exactly kauri, nor were the tree ferns quite the same Cryptogamia that flourished on the Aucklands and Macquarie. Of course, those islands were many miles away to the north, and certain local variations might be expected. All the same——

"Mutants," he muttered, frowning. "Tends to substantiate Darwin's isolation theories. I'll have to take a couple of specimens back to Halburton."

"*Wahi*," said Kolu nervously, "we go back now?"

"Now!" exploded Carver. "We just got here! Do you think we came all the way from Macquarie for one look? We stay here a day or two, so I have a chance to take a look at this place's animal life. What's the matter, anyway?"

"The trees, *wahi*!" wailed Malloa.

"*Bunyip*!—the walking trees, the talking trees!"

"Bah! Walking and talking, eh?" He seized a stone from the pebbled beach and sent it spinning into the nearest mass of dusky green. "Let's hear 'em say a few cuss words, then."

THE STONE tore through leaves and creepers, and the gentle crash died into motionless silence. Or not entirely motionless; for a moment something dark and tiny fluttered there, and then soared briefly into black silhouette against the sky. It was small as a sparrow, but batlike, with membranous wings. Yet Carver stared at it amazed, for it trailed a twelve-inch tail, thin as a pencil, but certainly an appendage no normal bat ought to possess.

For a moment or two the creature fluttered awkwardly in the sunlight, its strange tail lashing, and then it swooped again into the dusk of the forest whence his missile had frightened it. There was only an echo of its wild, shrill cry remaining, something that sounded like "*Wheer! Whe-e-e-r!*"

"What the devil!" said Carver. "There are two species of Chiroptera in New Zealand and neighboring islands, and that was neither of them! No bat has a tail like that!"

Kolu and Malloa were wailing in chorus. The creature had been too small to induce outright panic, but it had flashed against the sky with a sinister appearance of abnormality. It was a monstrosity, an aberration, and the minds of Polynesians were not such as to face unknown strangeness without fear. Nor for that matter, reflected Carver, were the minds of whites; he shrugged away a queer feeling of apprehension. It would be sheer stupidity to permit the fears of Kolu and Malloa to influence a perfectly sane zoölogist.

"Shut up!" he snapped. "We'll have to trap that fellow, or one of his cousins. I'll want a specimen of his tribe. Rhi-

nolophidae, I'll bet a trade dollar, but a brand-new species. We'll net one to-night."

The voices of the two brown islanders rose in terror. Carver cut in sharply on the protests and expostulations and fragmentary descriptions of the horrors of *bunyips*, walking and talking trees, and the bat-winged spirits of evil.

"Come on," he said gruffly. "Turn out the stuff in the proa. I'll look along the beach for a stream of fresh water. Mawson reported water on the north side of the island."

Malloa and Kolu were muttering as he turned away. Before him the beach stretched white in the late afternoon sun; at his left rolled the blue Pacific and at his right slumbered the strange, dark forest. His eyes kept straying to that dusky quarter; he noted curiously the all but infinite variety of the vegetable forms, marveling that there was scarcely a tree or shrub that he could identify with any variety common on Macquarie or the Aucklands, or far-away New Zealand. But, of course, he mused, he was no botanist.

Anyway, remote islands often produced their own particular varieties of flora and fauna. That was part of Darwin's original evolution theory, this idea of isolation. Look at Mauritius and its dodo, and the Galapagos turtles, or for that matter, the kiwi of New Zealand, or the gigantic, extinct moa. And yet—he frowned over the thought—one never found an island that was *entirely* covered by its own unique forms of plant life. Wind-blown seeds or ocean-borne débris always caused an interchange of vegetation among islands; birds carried seeds clinging to their feathers, and even the occasional human visitors aided in the exchange.

Besides, a careful observer like Mawson in 1911 would certainly have reported the peculiarities of Austin Island. He hadn't; nor, for that matter, had the whalers, who touched here at intervals

as they headed into the antarctic, brought back any reports. Of course, whalers had become very rare of late years; it might have been a decade or more since one had made anchorage at Austin. Yet what change could have occurred in ten or fifteen years?

II.

CARVER came suddenly upon a narrow tidal arm into which dropped a tinkling trickle of water from a granite ledge at the verge of the jungle. He stooped, moistened his finger, and tasted it. It was brackish but drinkable, and therefore quite satisfactory. He could hardly expect to find a larger stream on Austin, since the watershed was too small on an island only seven miles by three. With his eyes he followed the course of the brook upward into the tangle of fern forest, and a flash of movement arrested his eyes. For a moment he gazed in complete incredulity, knowing that he couldn't possibly be seeing—what he *was* seeing!

The creature had apparently been drinking at the brink of the stream, for Carver glimpsed it first in kneeling position. That was part of the surprise—the fact that it was kneeling—for no animal save man ever assumes that attitude, and this being, whatever it might be, was not human.

Wild, yellow eyes glared back at him, and the thing rose to an erect posture. It was a biped, a small travesty of man, standing no more than twenty inches in height. Little clawed fingers clutched at hanging creepers. Carver had a shocked glimpse of a body covered in patches with ragged gray fur, of an agile tail, of needle-sharp teeth in a little red mouth. But mostly he saw only malevolent yellow eyes and a face that was not human, yet had a hideous suggestion of humanity gone wild, a stunning miniature synthesis of manlike and feline characteristics.

Carver had spent much time in the waste lands of the planet. His reaction was almost in the nature of a reflex, without thought or volition; his blue-barreled gun leaped and flashed as if it moved of itself. This automatism was a valuable quality in the wilder portions of the earth; more than once he had saved his life by shooting first when startled, and reflecting afterward. But the quickness of the reaction did not lend itself to accuracy.

His bullet tore a leaf at the very cheek of the creature. The thing snarled, and then, with a final flash of yellow flame from its wild eyes, leaped headlong into the tangle of foliage and vanished.

Carver whistled. "What in Heaven's name," he muttered aloud, "was that?" But he had small time for reflection; long shadows and an orange tint to the afternoon light warned that darkness—sudden, twilightless darkness—was near. He turned back along the curving beach toward the outrigger.

A low coral spit hid the craft and the two Maoris, and the ridge jutted like a bar squarely across the face of the descending sun. Carver squinted against the light and trudged thoughtfully onward—to freeze into sudden immobility at the sound of a terrified scream from the direction of the proa!

He broke into a run. It was no more than a hundred yards to the coral ridge, but so swiftly did the sun drop in these latitudes that dusk seemed to race him to the crest. Shadows skittered along the beach as he leaped to the top and stared frantically toward the spot where his craft had been beached.

Something was there. A box—part of the provisions from the proa. But the proa itself—was gone!

THEN he saw it, already a half dozen cables' lengths out in the bay. Malloa was crouching in the stern, Kolu was partly hidden by the sail, as the craft

moved swiftly and steadily out toward the darkness gathering in the north.

His first impulse was to shout, and shout he did. Then he realized that they were beyond earshot, and very deliberately, he fired his revolver three times. Twice he shot into the air, but since Malloa cast not even a glance backward, the third bullet he sent carefully in the direction of the fleeing pair. Whether or not it took effect he could not tell, but the proa only slid more swiftly into the black distance.

He stared in hot rage after the deserters until even the white sail had vanished; then he ceased to swear, sat glumly on the single box they had unloaded, and fell to wondering what had frightened them. But that was something he never discovered.

Full darkness settled. In the sky appeared the strange constellations of the heaven's under hemisphere; southeast glowed the glorious Southern Cross, and south the mystic Clouds of Magellan. But Carver had no eyes for these beauties; he was already long familiar with the aspect of the Southern skies.

He mused over his situation. It was irritating rather than desperate, for he was armed, and even had he not been, there was no dangerous animal life on these tiny islands south of the Aucklands, nor, excepting man, on New Zealand itself. But not even man lived in the Aucklands, or on Macquarie, or here on remote Austin.

Malloa and Kolu had been terrifically frightened, beyond doubt; but it took very little to rouse the superstitious fears of a Polynesian. A strange species of bat was enough, or even a kiwi passing in the shadows of the brush, or merely their own fancies, stimulated by whatever wild tales had ringed lonely Austin Island with taboos.

And as for rescue, that too was certain. Malloa and Kolu might recover their courage and return for him. If they didn't, they still might make for

Macquarie Island and the *Fortune* expedition. Even if they did what he supposed they naturally would do—head for the Aucklands, and then to their home on the Chathams—still Jameson would begin to worry in three or four days, and there'd be a search made.

There was no danger, he told himself—nothing to worry about. Best thing to do was simply to go about his work. Luckily, the box on which he sat was the one that contained his cyanide jar for insect specimens, nets, traps, and snares. He could proceed just as planned, except that he'd have to devote some of his time to hunting and preparing food.

III.

CARVER lighted his pipe, set about building a fire of the plentiful driftwood, and prepared for the night. He delivered himself of a few choice epithets descriptive of the two Maoris as he realized that his comfortable sleeping bag was gone with the proa, but the fire would serve against the chill of the high Southern latitude. He puffed his pipe reflectively to its end, lay down near his driftwood blaze, and prepared to sleep.

When, seven hours and fifty minutes later, the edge of the sun dented the eastern horizon, he was ready to admit that the night was something other than a success. He was hardened to the tiny, persistent fleas that skipped out of the sand, and his skin had long been toughened to the bloodthirsty night insects of the islands. Yet he had made a decided failure at the attempt to sleep.

Why? It surely couldn't be nervousness over the fact of strange surroundings and loneliness. Alan Carver had spent too many nights in wild and solitary places for that. Yet the night sounds had kept him in a perpetual state of half-wakeful apprehension, and at least a dozen times he had started to full consciousness in a sweat of nervousness. Why?

He knew why. It was the night sounds themselves. Not their loudness nor their menace, but their—well, their *variety*. He knew what darkness ought to bring forth in the way of noises; he knew every bird call and bat squeak indigenous to these islands. But the noises of night here on Austin Island had refused to conform to his pattern of knowledge. They were strange, unclassified, and far more varied than they should have been; and yet, even through the wildest cry, he fancied a disturbing note of familiarity.

Carver shrugged. In the clear daylight his memories of the night seemed like foolish and perverse notions, quite inexcusable in the mind of one as accustomed to lonely places as himself. He heaved his powerful form erect, stretched, and gazed toward the matted tangle of plant life under the tree ferns.

He was hungry, and somewhere in there was breakfast, either fruit or bird. Those represented the entire range of choice, since he was not at present hungry enough to consider any of the other possible variations—rat, bat, or dog. That covered the fauna of these islands.

Did it, indeed? He frowned as sudden remembrance struck him. What of the wild, yellow-eyed imp that had snarled at him from the brookside? He had forgotten that in the excitement of the desertion of Kolu and Malloa. That was certainly neither bat, rat, nor dog. What was it?

Still frowning, he felt his gun, glancing to assure himself of its readiness. The two Maoris might have been frightened away by an imaginary menace, but the thing by the brook was something he could not ascribe to superstition. He had seen that. He frowned more deeply as he recalled the tailed bat of earlier in the preceding evening. That was no native fancy either.

HE strode toward the fern forest. Suppose Austin Island *did* harbor a few

mutants, freaks, and individual species. What of it? So much the better; it justified the *Fortune* expedition. It might contribute to the fame of one Alan Carver, zoölogist, if he were the first to report this strange, insular animal world. And yet—it was queer that Mawson said nothing of it, nor had the whalers.

At the edge of the forest he stopped short. Suddenly he perceived what was responsible for its aspect of queerness. He saw what Malloa had meant when he gestured toward the trees. He gazed incredulously, peering from tree to tree. It was true. There were no related species. There were no two trees alike. Not two alike. Each was individual in leaf, bark, stem. There were no two the same. *No two trees were alike!*

But that was impossible. Botanist or not, he knew the impossibility of it. It was all the more impossible on a remote islet where inbreeding must of necessity take place. The living forms might differ from those of other islands, but not from each other—at least, not in such incredible profusion. The number of species must be limited by the very intensity of competition on an island. *Must be!*

Carver stepped back a half dozen paces, surveying the forest wall. It was true. There were ferns innumerable; there were pines; there were deciduous trees—but there were, in the hundred yard stretch he could scan accurately, *no two alike!* No two, even, with enough similarity to be assigned to the same species, perhaps not even to the same genus.

He stood frozen in uncomprehending bewilderment. What was the meaning of it? What was the origin of this unnatural plenitude of species and genera? How could any one of the numberless forms reproduce unless there were somewhere others of its kind to fertilize it? It was true, of course,

that blossoms on the same tree could cross-fertilize each other, but where, then, were the offspring? It is a fundamental aspect of nature that from acorns spring oaks, and from kauri cones spring kauri pines.

In utter perplexity, he turned along the beach, edging away from the wash of the waves into which he had almost backed. The solid wall of forest was immobile save where the sea breeze ruffled its leaves, but all that Carver saw was the unbelievable variety of those leaves. Nowhere—nowhere—was there a single tree that resembled any he had seen before.

There were compound leaves, and digitate, palmate, cordate, acuminate, bipinnate, and ensiform ones. There were specimens of every variety he could name, and even a zoölogist can name a number if he has worked with a botanist like Halburton. But there were *no* specimens that looked as if they might be related, however distantly, to any one of the others. It was as if, on Austin Island, the walls between the genera had dissolved, and only the grand divisions remained.

CARVER had covered nearly a mile along the beach before the pangs of hunger recalled his original mission to his mind. He had to have food of some sort, animal or vegetable. With a feeling of distinct relief, he eyed the beach birds quarreling raucously up and down the sand; at least, they were perfectly normal representatives of the genus *Larus*. But they made, at best, but tough and oily fare, and his glance returned again to the mysterious woodlands.

He saw now a trail or path, or perhaps just a chance thinning of the vegetation along a subsoil ridge of rock, that led into the green shades, slanting toward the forested hill at the western end of the island. That offered the first convenient means of penetration he

had encountered, and in a moment he was slipping through the dusky aisle, watching sharply for either fruit or bird.

He saw fruit in plenty. Many of the trees bore globes and ovoids of various sizes, but the difficulty, so far as Carver was concerned, was that he saw none he could recognize as edible. He dared not chance biting into some poisonous variety, and Heaven alone knew what wild and deadly alkaloids this queer island might produce.

Birds fluttered and called in the branches, but for the moment he saw none large enough to warrant a bullet. And besides, another queer fact had caught his attention: he noticed that the farther he proceeded from the sea, the more bizarre became the infinite forms of the trees of the forest. Along the beach he had been able at least to assign an individual growth to its family, if not its genus, but here even those distinctions began to vanish.

He knew why. "The coastal growths are crossed with strays from other islands," he muttered. "But in here they've run wild. The whole island's run wild."

The movement of a dark mass against the leaf-sprinkled sky caught his attention. A bird? If it were, it was a much larger one than the inconsiderable passerine songsters that fluttered about him. He raised his revolver carefully, and fired.

The weird forest echoed to the report. A body large as a duck crashed with a long, strange cry, thrashed briefly among the grasses of the forest floor, and was still. Carver hurried forward to stare in perplexity at his victim.

It was not a bird. It was a climbing creature of some sort, armed with viciously sharp claws and wicked, needle-pointed white teeth in a triangular little red mouth. It resembled quite closely a small dog—if one could imagine a tree-climbing dog—and for a

moment Carver froze in surprise at the thought that he had inadvertently shot somebody's mongrel terrier, or at least some specimen of *Canis*.

But the creature was no dog. Even disregarding its plunge from the tree-tops, Carver could see that. The retractile claws, five on the forefeet, four on the hind, were evidence enough, but stronger still was the evidence of those needle teeth. This was one of the *Felidæ*. He could see further proof in the yellow, slitted eyes that glared at him in moribund hate, to lose their fire now in death. This was no dog, but a cat!

His mind flashed to that other apparition on the brink of the stream. That had borne a wild aspect of feline nature, too. What was the meaning of it? Cats that looked like monkeys; cats that looked like dogs!

He had lost his hunger. After a moment he picked up the furry body and set off toward the beach. The zoölogist had superseded the man; this dangling bit of disintegrating protoplasm was no longer food, but a rare specimen. He had to get to the beach to do what he could to preserve it. It would be named after him—*Felis Carveri*—doubtless.

IV.

A SOUND behind him brought him to an abrupt halt. He peered cautiously back through the branch-roofed tunnel. He was being trailed. Something, bestial or human, lurked back there in the forest shadows. He saw it—or them—dimly, as formless as darker shades in the shifting array that marked the wind-stirred leaves.

For the first time, the successive mysteries began to induce a sense of menace. He increased his pace. The shadows slid and skittered behind him, and, lest he ascribe the thing to fancy, a low cry of some sort, a subdued howl, rose in the dusk of the forest at his

left, and was answered at his right.

He dared not run, knowing that the appearance of fear too often brought a charge from both beasts and primitive humans. He moved as quickly as he could without the effect of flight from danger, and at last saw the beach. There in the opening he could at least distinguish his pursuers, if they chose to attack.

But they didn't. He backed away from the wall of vegetation, but no forms followed him. Yet they were there. All the way back to the box and the remains of his fire, he knew that just within the cover of the leaves lurked wild forms.

The situation began to prey on his mind. He couldn't simply remain on the beach indefinitely, waiting for an attack. Sooner or later he'd have to sleep, and then—— Better to provoke the attack at once, see what sort of creatures he faced, and try to drive them off or exterminate them. He had, after all, plenty of ammunition.

He raised his gun, aimed at a skittering shadow, and fired. There was a howl that was indubitably bestial; before it had quivered into silence, others answered. Then Carver started violently backward, as the bushes quivered to the passage of bodies, and he saw what sort of beings had lurked there.

A line of perhaps a dozen forms leaped from the fringe of underbrush to the sand. For the space of a breath they were motionless, and Carver knew that he was in the grip of a zoologist's nightmare, for no other explanation was at all adequate.

The pack was vaguely doglike; but by no means did its members resemble the indigenous hunting dogs of New Zealand, nor the dingoes of Australia. Nor, for that matter, did they resemble any other dogs in his experience, nor, if the truth be told, any dogs at all, except perhaps in their lupine

method of attack, their subdued yelps, their slaving mouths, and the arrangement of their teeth—what Carver could see of that arrangement.

But the fact that bore home to him now was another stunning repetition of all his observations on Austin Island—they did not resemble each other! Indeed, it occurred to Carver with the devastating force of a blow that, so far on this mad island, he had seen no two living creatures, animal or vegetable, that appeared to belong to related species!

The nondescript pack inched forward. He saw the wildest extremes among the creatures—beings with long hind legs and short forelimbs; a creature with hairless, thorn-scarred skin and a face like the half-human visage of a werewolf; a tiny, rat-sized thing that yelped with a shrill, yapping voice; and a mighty, barrel-chested creature whose body seemed almost designed for erect posture, and who loped on its hinder limbs with its forepaws touching the ground at intervals like the knuckles of an orang-utan. That particular being was a horrible, yellow-fanged monstrosity, and Carver chose it for his first bullet.

THE THING dropped without a sound; the slug had split its skull. As the report echoed back and forth between the hills on the east and west extremities of Austin, the pack answered with a threatening chorus of bays, howls, growls, and shrieks. They shrank back momentarily from their companion's body, then came menacingly forward.

Again Carver fired. A red-eyed, hopping creature yelped and crumpled. The line halted nervously, divided now by two dead forms. Their cries were no more than a muffled growling as they eyed him with red and yellowish orbs.

He started suddenly as a different sound rose, a cry whose nature he could

not determine, though it seemed to come from a point where the forested bank rose sharply in a little cliff. It was as if some watcher urged on the nondescript pack, for they gathered courage again to advance. And it was at this moment that a viciously flung stone caught the man painfully on the shoulder.

He staggered, then scanned the line of brush. A missile meant human-kind. The mad island harbored something more than aberrant beasts.

A second cry sounded, and another stone hummed past his ear. But this time he had caught the flash of movement at the top of the cliff, and he fired instantly.

There was a scream. A human figure reeled from the cover of foliage, swayed, and pitched headlong into the brush at the base, ten feet below. The pack of creatures broke howling, as if their courage had vanished before this evidence of power. They fled like shadows into the forest.

But something about the figure that had fallen from the cliff struck Carver as strange. He frowned, waiting a moment to assure himself that the nondescript pack had fled, and that no other menace lurked in the brush, then he darted toward the place where his assailant had fallen.

The figure was human, beyond doubt—or was it? Here on this mad island where species seemed to take any form, Carver hesitated to make even that assumption. He bent over his fallen foe, who lay face down, then turned the body over. He stared.

IT WAS A GIRL. Her face, still as the features of the Buddha of Nikko, was young and lovely as a Venetian bronze figurine, with delicate features that even in unconsciousness had a wildness apparent in them. Her eyes, closed though they were, betrayed a slight, dryadlike slant.

The girl was white, though her skin was sun-darkened almost to a golden hue. Carver was certain of her color, nevertheless, for at the edges of her single garment—an untanned hide of leopardlike fur, already stiffening and cracking—her skin showed whiter.

Had he killed her? Curiously perturbed, he sought for the wound, and found it, at last, in a scarcely bleeding graze above her right knee. His shot had merely spun her off balance; it was the ten-foot fall from the cliff that had done the damage, of which the visible evidence was a reddening bruise on her left temple. But she was living. He swung her hastily into his arms and bore her across the beach, away from the brush in which her motley pack was doubtless still lurking.

He shook his nearly empty canteen, then tilted her head to pour water between her lips. Instantly her eyes flickered open, and for a moment she stared quite uncomprehendingly into Carver's eyes, not twelve inches from her own. Then her eyes widened, not so much in terror as in startled bewilderment; she twisted violently from his arms, tried twice to rise, and twice fell back as her legs refused to support her. At last she lay quite passive, keeping her fascinated gaze on his face.

But Carver received a shock as well. As her lids lifted, he started at the sight of the eyes behind them. They were unexpected, despite the hint given by their ever-so-faint Oriental cast, for they flamed upon him in a tawny hue. They were amber, almost golden, and wild as the eyes of a votary of Pan. She watched the zoölogist with the intentness of a captive bird, but not with a bird's timidity, for he saw her hand fumbling for the pointed stick or wooden knife in the thong about her waist.

He proffered the canteen, and she shrank away from his extended hand. He shook the container, and at the

sound of gurgling liquid, she took it gingerly, tilted a trickle into her hand, and then, to Carver's surprise, smelled it, her dainty nostrils flaring as widely as her diminutive, uptilted nose permitted. After a moment she drank from her cupped palm, poured another trickle, and drank that. It did not occur to her, apparently, to drink from the canteen.

Her mind cleared. She saw the two motionless bodies of the slain creatures, and murmured a low sound of sorrow. When she moved as if to rise, her gashed knee pained her, and she turned her strange eyes on Carter with a renewed expression of fear. She indicated the red streak of the injury.

"C'm on?" she said with a questioning inflection.

Carver realized that the sound resembled English words through accident only. "Where to?" He grinned.

She shook a puzzled head. "*Bu-r-r-o-o-om!*" she said. "*Zee-e-e-e!*"

He understood that. It was her attempt to imitate the sound of his shot and the hum of the bullet. He tapped the revolver. "Magic!" he said warningly. "Bad medicine. Better be good girl. See?" It was obvious that she didn't understand. "*Thumbi?*" he tried. "You Maori?"

No result save a long look from slanting, golden eyes.

"Well," he grunted, "*Sprechen sie Deutsch*, then? Or Kanaka? Or—what the devil! That's all I know—*Latium intelligisne?*"

"C'm on?" she said faintly, her eyes on the gun. She rubbed the scratch on her leg and the bruise on her temple, apparently ascribing both to the weapon.

"All right," Carver acceded grimly. He reflected that it could do no harm to impress the girl with his powers. "It'll come on. Watch this!"

He leveled his weapon at the first target he saw—a dead branch that jutted from a drifted log at the end of the

coral spit. It was thick as his arm, but it must have been thoroughly rotted, for instead of stripping a bit of bark as he expected, the heavy slug shattered the entire branch.

"O-o-oh!" gasped the girl, clapping her hands over her ears. Her eyes flickered sidewise at him; then she scrambled wildly to her feet. She was in sheer panic.

"No, you don't!" he snapped. He caught her arm. "You stay right here!"

FOR A MOMENT he was amazed at the lithe strength of her. Her free arm flashed upward with the wooden dagger, and he caught that wrist as well. Her muscles were like tempered steel wires. She twisted frantically; then, with sudden yielding, stood quietly in his grasp, as if she thought, "What use to struggle with a god?"

He released her. "Sit down!" he growled.

She obeyed his gesture rather than his voice. She sat on the sand before him, gazing up with a trace of fear but more of wariness in her honey-hued eyes.

"Where are your people?" he asked sharply, pointing at her and then waving in an inclusive gesture at the forest.

She stared without comprehension, and he varied his symbolism. "Your home, then?" He pantomimed the act of sleeping.

The result was the same, simply a troubled look from her glorious eyes.

"Now what the devil!" he muttered. "You have a name, haven't you? A name? Look!" He tapped his chest. "Alan. Get it? Alan. Alan."

That she understood instantly. "Alan," she repeated dutifully, looking up at him.

But when he attempted to make her assign a name to herself, he failed utterly. The only effect of his efforts was a deepening of the perplexity in her

features. He reverted, at last, to the effort to make her indicate in some fashion the place of her home and people, varying his gestures in every way he could devise. And at last she seemed to comprehend.

She rose doubtfully to her feet and uttered a strange, low, mournful cry. It was answered instantly from the brush, and Carver stiffened as he saw the emergence of that same motley pack of nondescript beings. They must have been watching, lurking just beyond view. Again they circled the two slain members as they advanced.

V.

CARVER whipped out his revolver.

His movement was followed by a wail of anguish from the girl, who flung herself before him, arms outspread as if to shield the wild pack from the menace of the weapon. She faced him fearfully, yet defiantly, and there was puzzled questioning in her face as well. It was as if she accused the man of ordering her to summon her companions only to threaten them with death.

He stared. "O. K.," he said at last. "What's a couple of rare specimens on an island that's covered with 'em? Send 'em away."

She obeyed his gesture of command. The weird pack slunk silently from view, and the girl backed hesitantly away as if to follow them, but halted abruptly at Carver's word. Her attitude was a curious one, partly fear, but more largely composed, it seemed, of a sort of fascination, as if she did not quite understand the zoologist's nature.

This was a feeling he shared to a certain extent, for there was certainly something mysterious in encountering a white girl on this mad Austin Island. It was as if there were one specimen, and only one, of every species in the world here on this tiny islet, and she were the representative of humanity.

But still he frowned perplexedly into her wild, amber eyes.

It occurred to him again that on the whole part of Austin he had traversed he had seen no two creatures alike. Was this girl, too, a mutant, a variant of some species other than human, who had through mere chance adopted a perfect human form? As, for instance, the doglike cat whose body still lay on the sand where he had flung it. Was she, perhaps, the sole representative of the human form on the island, Eve before Adam, in the garden? There had been a woman before Adam, he mused.

"We'll call you Lilith," he said thoughtfully. The name fitted her wild, perfect features and her flame-hued eyes. Lilith, the mysterious being whom Adam found before him in Paradise, before Eve was created. "Lilith," he repeated. "Alan—Lilith. See?"

She echoed the sounds and the gesture. Without question she accepted the name he had given her, and that she understood the sound as a name was evident by her response to it. For when he uttered it a few minutes later, her amber eyes flashed instantly to his face and remained in a silent question.

Carver laughed and resumed his puzzled thoughts. Reflectively, he produced his pipe and packed it, then struck a match and lighted it. He was startled by a low cry from the girl Lilith, and looked up to see her extended hand. For a moment he failed to perceive what it was she sought, and then her fingers closed around the hissing stem of the match! She had tried to seize the flame as one takes a fluttering bit of cloth.

She screamed in pain and fright. At once the pack of nondescripts appeared at the edge of the forest, voicing their howls of anger, and Carver whirled again to meet them. But again Lilith, recovering from the surprise of the burn, halted the pack with her voice, and sent them slinking away into the

shades. She sucked her scorched fingers and turned widened eyes to his face. He realized with a start of disbelief that the girl did not comprehend fire!

THERE WAS a bottle of alcohol in the box of equipment; he produced it and, taking Lilith's hand, bound a moistened strip of handkerchief about her two blistered fingers, though he knew well enough that alcohol was a poor remedy for burns. He applied the disinfectant to the bullet graze on her knee; she moaned softly at the sting, then smiled as it lessened, while her strange amber eyes followed fixedly the puffs of smoke from his pipe, and her nostrils quivered to the pungent tobacco odor.

"Now what," queried Carver, smoking reflectively, "am I going to do with you?"

Lilith had apparently no suggestion. She simply continued her wide-eyed regard.

"At least," he resumed, "you ought to know what's good to eat on this crazy island. You *do* eat, don't you?" He pantomimed the act.

The girl understood instantly. She rose, stepped to the spot where the body of the doglike cat lay, and seemed for an instant to sniff its scent. Then she removed the wooden knife from her girdle, placed one bare foot upon the body, and hacked and tore a strip of flesh from it. She extended the bloody chunk to him, and was obviously surprised at his gesture of refusal.

After a moment she withdrew it, glanced again at his face, and set her own small white teeth in the meat. Carver noted with interest how daintily she managed even that difficult maneuver, so that her soft lips were not stained by the slightest drop of blood.

But his own hunger was unappeased. He frowned over the problem of conveying his meaning, but at last hit upon

a means. "Lilith!" he said sharply. Her eyes flashed at once to him. He indicated the meat she held, then waved at the mysterious line of trees. "Fruit," he said. "Tree meat. See?" He went through the motions of eating.

Again the girl understood instantly. It was odd, he mused, how readily she comprehended some things, while others equally simple seemed utterly beyond her. Queer, as everything on Austin Island was queer. Was Lilith, after all, entirely human? He followed her to the tree line, stealing a sidelong look at her wild, flame-colored eyes, and her features, beautiful, but untamed, dryadlike, elfin—wild.

She scrambled up the crumbling embankment and seemed to vanish magically into the shadows. For a moment Carver felt a surge of alarm as he clambered desperately after her; she could elude him here as easily as if she were indeed a shadow herself. True, he had no moral right to restrain her, save the hardly tenable one given by her attack; but he did not want to lose her—not yet. Or perhaps not at all.

"Lilith!" he shouted as he topped the cliff.

She appeared almost at his elbow. Above them twined a curious vine like a creeping conifer of some kind, bearing white-greenish fruits the size and shape of a pullet's egg. Lilith seized one, halved it with agile fingers, and raised a portion to her nostrils. She sniffed carefully, daintily, then flung the fruit away.

"*Pah bo!*" she said, wrinkling her nose distastefully.

SHE FOUND another sort, a queerly unprepossessing fruit composed of five fingerlike protuberances from a fibrous disk, so that the whole bore the appearance of a large, malformed hand. This she sniffed as carefully as she had the other, then smiled sideways up at him.

"*Bo!*" she said, extending it.

Carver hesitated. After all, it was not much more than an hour ago that the girl had been trying to kill him. Was it not entirely possible that she was now pursuing the same end, offering him a poisonous fruit?

She shook the unpleasantly bulbous object. "*Bo!*" she repeated, and then, exactly as if she understood his hesitancy, she broke off one of the fingers and thrust it into her own mouth. She smiled at him.

"Good enough, Lilith." He grinned, taking the remainder.

It was much pleasanter to the tongue than to the eye. The pulp had a tart sweetness that was vaguely familiar to him, but he could not quite identify the taste. Nevertheless, encouraged by Lilith's example, he ate until his hunger was appeased.

VI.

THE ENCOUNTER with Lilith and her wild pack had wiped out thoughts of his mission. Striding back toward the beach he frowned, remembering that he was here as Alan Carver, zoölogist, and in no other rôle. Yet—where could he begin? He was here to classify and to take specimens, but what was he to do on a mad island where every creature was of an unknown variety? There was no possibility of classification here, because there were no classes. There was only one of everything—or so it appeared.

Rather than set about a task futile on the very face of it, Carver turned his thoughts another way. Somewhere on Austin was the secret of this riotous disorder, and it seemed better to seek the ultimate key than to fritter away his time at the endless task of classifying. He would explore the island. Some strange volcanic gas, he mused vaguely, or some queer radioactive deposit—analogueous to Morgan's

experiments with X rays on germ plasm. Or—or something else. There must be some answer.

"Come on, Lilith," he ordered, and set off toward the west, where the hill seemed to be higher than the opposing eminence at the island's eastern extremity.

The girl followed with her accustomed obedience, with her honey-hued eyes fastened on Carver in that curious mixture of fear, wonder, and—perhaps—a dawning light of worship.

The zoölogist was not too preoccupied with the accumulation of mysteries to glance occasionally at the wild beauty of her face, and once he caught himself trying to picture her in civilized attire—her mahogany hair confined under one of the current tiny hats, her lithe body sheathed in finer textile than the dried and cracking skin she wore, her feet in dainty leather, and her ankles in chiffon. He scowled and thrust the visualization away, but whether because it seemed too anomalous or too attractive he did not trouble to analyze.

He turned up the slope. Austin was heavily wooded, like the Aucklands, but progress was easy, for it was through a forest, not a jungle. A mad forest, true enough, but still comparatively clear of underbrush.

A shadow flickered, then another. But the first was only a queen's pigeon, erecting its glorious feather crest, and the second only an owl parrot. The birds on Austin were normal; they were simply the ordinary feathered life of the southern seas. Why? Because they were mobile; they traveled, or were blown by storms, from island to island.

It was mid-afternoon before Carver reached the peak, where a solemn outcropping of black basalt rose treeless, like a forester's watchtower. He clambered up its eroded sides and stood with Lilith beside him, gazing out across the central valley of Austin Island to the



*It was exactly as if the creature
had leaped forward like a leader
—to exhort his troops—*



*The magazine
emptied — and
there was no
time to reload
—now—*

hill at the eastern point, rising until its peak nearly matched their own.

Between sprawled the wild forest, in whose depths blue-green shadows shifted in the breeze like squalls visible here and there on the surface of a calm lake. Some sort of soaring bird circled below, and far away, in the very center of the valley, was the sparkle of water. That, he knew must be the rivulet he had already visited. But nowhere—nowhere at all—was there any sign of human occupation to account for the presence of Lilith—no smoke, no clearing, nothing.

THE GIRL touched his arm timidly, and gestured toward the opposite hill.

"*Pah bo!*" she said tremulously. It must have been quite obvious to her that he failed to understand, for she amplified the phrase. "*R-r-r-r!*" she growled, drawing her perfect lips into an imitation of a snarl. "*Pah bo, lay shot.*" She pointed again toward the east.

Was she trying to tell him that some fierce beasts dwelt in that region? Carver could not interpret her symbolism in any other way, and the phrase she had used was the same she had applied to the poisonous fruit.

He narrowed his eyes as he gazed intently toward the eastern eminence, then started. There was something, not on the opposing hill, but down near the flash of water midway between.

At his side hung the prism binoculars he used for identifying birds. He swung the instrument to his eyes. What he saw, still not clearly enough for certainty, was a mound or structure, vine-grown and irregular. But it might be the roofless walls of a ruined cottage.

The sun was sliding westward. Too late in the day now for exploration, but to-morrow would do. He marked the place of the mound in his memory, then scrambled down.

As darkness approached, Lilith began

to evince a curious reluctance to move eastward, hanging back, sometimes dragging timidly at his arm. Twice she said "No, no!" and Carver wondered whether the word was part of her vocabulary or whether she had acquired it from him. Heaven knew, he reflected amusedly, that he had used the word often enough, as one might use it to a child.

He was hungry again, despite the occasional fruits Lilith had plucked for him. On the beach he shot a magnificent *Cygnus Atratus*, a black Australian swan, and carried it with its head dragging, while Lilith, awed by the shot, followed him now without objection.

He strode along the beach to his box; not that that stretch was any more desirable than the next, but if Kolu and Malloa were to return, or were to guide a rescue expedition from the *Fortune*, that was the spot they'd seek first.

He gathered driftwood, and, just as darkness fell, lighted a fire.

He grinned at Lilith's start of panic and her low "O-o-oh!" of sheer terror as the blaze of the match caught and spread. She remembered her scorched fingers, doubtless, and she circled warily around the flames, to crouch behind him where he sat plucking and cleaning the great bird.

She was obviously quite uncomprehending as he pierced the fowl with a spit and set about roasting it, but he smiled at the manner in which her sensitive nostrils twitched at the combined odor of burning wood and cooking meat.

When it was done, he cut her a portion of the flesh, rich and fat like roast goose, and he smiled again at her bewilderment. She ate it, but very gingerly, puzzled alike by the heat and the altered taste; beyond question she would have preferred it raw and bleeding. When she had finished, she scrubbed the grease very daintily from her fingers with wet sand at a tidal pool.

AST-7

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AST-8

CARVER was puzzling again over what to do with her. He didn't want to lose her, yet he could hardly stay awake all night to guard her. There were the ropes that had lashed his case of supplies; he could, he supposed, tie her wrists and ankles; but somehow the idea appealed to him not at all. She was too naïve, too trusting, too awe-struck and worshipful. And besides, savage or not, she was a white girl over whom he had no conceivable rightful authority.

At last he shrugged and grinned across the dying fire at Lilith, who had lost some of her fear of the leaping flames. "It's up to you," he remarked amiably. "I'd like you to stick around, but I won't insist on it."

She answered his smile with her own quick, flashing one, and the gleam of eyes exactly the color of the flames they mirrored, but she said nothing. Carver sprawled in the sand; it was cool enough to dull the activities of the troublesome sand fleas, and after a while he slept.

His rest was decidedly intermittent. The wild chorus of night sounds disturbed him again with its strangeness, and he woke to see Lilith staring fixedly into the fire's dying embers. Some time later he wakened again; now the fire was quite extinct, but Lilith was standing. While he watched her silently, she turned toward the forest. His heart sank; she was leaving.

But she paused. She bent over something dark—the body of one of the creatures he had shot. The big one, it was; he saw her struggle to lift it, and, finding the weight too great, drag it laboriously to the coral spit and roll it into the sea.

Slowly she returned; she gathered the smaller body into her arms and repeated the act, standing motionless for long minutes over the black water. When she returned once more she faced the rising moon for a moment, and he saw

her eyes glistening with tears. He knew he had witnessed a burial.

He watched her in silence. She dropped to the sand near the black smear of ashes; but she seemed in no need of sleep. She stared so fixedly and so apprehensively toward the east that Carver felt a sense of foreboding. He was about to raise himself to sitting position when Lilith, as if arriving at a decision after long pondering, suddenly sprang to her feet and darted across the sand to the trees.

Startled, he stared into the shadows, and out of them drifted that same odd call he had heard before. He strained his ears, and was certain he heard a faint yapping and yelping among the trees. She had summoned her pack. Carver drew his revolver quietly from its holster and half rose on his arm.

Lilith reappeared. Behind her, darker shadows against the shadowy growths, lurked wild forms, and Carver's hand tightened on the grip of his revolver.

But there was no attack. The girl uttered a low command of some sort, the slinking shadows vanished, and she returned alone to her place on the sand.

The zoölogist could see her face, silver-pale in the moonlight, as she glanced at him, but he lay still in apparent slumber, and Lilith, after a moment, seemed ready to imitate him. The apprehension had vanished from her features; she was calmer, more confident. Carver realized why, suddenly; she had set her pack to guard against whatever danger threatened from the east.

VII.

DAWN ROUSED HIM. Lilith was still sleeping, curled like a child on the sand, and for some time he stood gazing down on her. She was very beautiful, and now, with her tawny eyes closed, she seemed much less mysterious; she seemed no island nymph or

dryad, but simply a lovely, savage, primitive girl. Yet he knew—or he was beginning to suspect—the mad truth about Austin Island. If the truth were what he feared, then he might as well fall in love with a sphinx, or a mermaid, or a female centaur, as with Lilith.

He steeled himself. "Lilith!" he called gruffly.

She awoke with a start of terror. For a moment she faced him with sheer panic in her eyes; then she remembered, gasped, and smiled tremulously. Her smile made it very hard for him to remember what it was that he feared in her, for she looked beautifully and appealingly human save for her wild, flame-colored eyes, and even what he fancied he saw in those might be but his own imagining.

She followed him toward the trees. There was no sign of her bestial bodyguards, though Carver suspected their nearness. He breakfasted again on fruits chosen by Lilith, selected unerringly, from the almost infinite variety, by her delicate nostrils. Carver mused interestedly that smell seemed to be the one means of identifying genera on this insane island.

Smell is chemical in nature. Chemical differences meant glandular ones, and glandular differences, in the last analysis, probably accounted for racial ones. Very likely the differences between a cat, say, and a dog was, in the ultimate sense, a glandular difference. He scowled at the thought and stared narrowly at Lilith; but, peer as he might, she seemed neither more nor less than an unusually lovely little savage—except for her eyes.

He was moving toward the eastern part of the island, intending to follow the brook to the site of the ruined cabin, if it *was* a ruined cabin. Again he noted the girl's nervousness as they approached the stream that nearly bisected this part of the valley. Certainly, un-

less her fears were sheer superstition, there was something dangerous there. He examined his gun again, then strode on.

At the bank of the brook Lilith began to present difficulties. She snatched his arm and tugged him back, wailing "No, no, no!" in frightened repetition.

When he glanced at her in impatient questioning, she could only repeat her phrase of yesterday. "*Lay shot,*" she said, anxiously and fearfully. "*Lay shot!*"

"Humph!" he growled. "A cannon's the only bird I ever heard of that could——" He turned to follow the watercourse into the forest.

LILITH hung back. She could not bring herself to follow him there. For an instant he paused, looking back at her slim loveliness, then turned and strode on. Better that she remained where she was. Better if he never saw her again, for she was too beautiful for close proximity. Yet Heaven knew, he mused, that she *looked* human enough.

But Lilith rebelled. Once she was certain that he was determined to go on, she gave a frightened cry. "Alan!" she called. "Al-an!"

He turned, astonished that she remembered his name, and found her darting to his side. She was pallid, horribly frightened, but she would not let him go alone.

Yet there was nothing to indicate that this region of the island was more dangerous than the rest. There was the same mad profusion of varieties of vegetation, the same unclassifiable leaves, fruits, and flowers. Only—or he imagined this—there were fewer birds.

One thing slowed their progress. At times the eastern bank of the rivulet seemed more open than their side, but Lilith steadfastly refused to permit him to cross. When he tried it, she clung so desperately and so violently to his

arms that he at last yielded, and plowed his way through the underbrush on his own bank. It was as if the watercourse were a dividing line, a frontier, or—he frowned—a border.

By noon they had reached a point which Carver knew must be close indeed to the spot he sought. He peered through the tunnel that arched over the course of the brook, and there ahead, so overgrown that it blended perfectly with the forest wall, he saw it.

It *was* a cabin, or the remains of one. The log walls still stood, but the roof, doubtless of thatch, had long ago disintegrated. But what struck Carver first was the certainty, evident in design, in window openings, in doorway, that this was no native hut. It had been a white man's cabin of perhaps three rooms.

It stood on the eastern bank; but by now the brook had narrowed to a mere rill, gurgling from pool to tiny rapids. He sprang across, disregarding Lilith's anguished cry. But at a glimpse of her face he did pause. Her magnificent honey-hued eyes were wide with fear, while her lips were set in a tense little line of grimmest determination. She looked as an ancient martyr must have looked marching out to face the lions, as she stepped deliberately across to his side. It was almost as if she said, "If you are bound to die, then I will die beside you."

Yet within the crumbling walls there was nothing to inspire fear. There was no animal life at all, except a tiny, rat-like being that skittered out between the logs at their approach. Carver stared around him at the grassy and fern-grown interior, at the remnants of decaying furniture and the fallen debris. It had been years since this place had known human occupants, a decade at the very least.

HIS FOOT struck something. He glanced down to see a human skull and

a human femur in the grass. And then other bones, though none of them were in a natural position. Their former owner must have died there where the ruined cot sagged, and been dragged here by—well, by whatever it was that had feasted on human carrion.

He glanced sidewise at Lilith, but she was simply staring affrightedly toward the east. She had not noticed the bones, or if she had, they had meant nothing to her. Carver poked gingerly among them for some clue to the identity of the remains, but there was nothing save a corroded belt buckle. That, of course, was a little; it had been a man; and most probably a white man.

Most of the debris was inches deep in the accumulation of loam. He kicked among the fragments of what must once have been a cupboard, and again his foot struck something hard and round—no skull this time, but an ordinary jar.

He picked it up. It was sealed, and there was something in it. The cap was hopelessly stuck by the corrosion of years; Carver smashed the glass against a log. What he picked from the fragments was a notebook, yellow-edged and brittle with time. He swore softly as a dozen leaves disintegrated in his hands, but what remained seemed stronger. He hunched down on the log and scanned the all-but-obliterated ink.

There was a date and a name. The name was Ambrose Callan, and the date was October 25th, 1921. He frowned. In 1921 he had been—let's see, he mused; fifteen years ago—he had been in grade school. Yet the name Ambrose Callan had a familiar ring to it.

He read more of the faded, written lines, then stared thoughtfully into space. That *was* the man, then. He remembered the Callan expedition because as a youngster he had been interested in far places, exploration, and adventure, as what youngster isn't? Professor Ambrose Callan of Northern;

he began to remember that Morgan had based some of his work with artificial species—synthetic evolution—on Callan's observations.

But Morgan had only succeeded in creating a few new species of fruit fly, of *Drosophila*, by exposing germ plasma to hard X rays. Nothing like this—this madhouse of Austin Island. He stole a look at the tense and fearful Lilith, and shuddered, for she seemed so lovely—and so human. He turned his eyes to the crumbling pages and read on, for here at last he was close to the secret.

He was startled by Lilith's sudden wail of terror. "*Lay shot!*" she cried. "*Alan, lay shot!*"

He followed her gesture, but saw nothing. Her eyes were doubtless sharper than his, yet—There! In the deep afternoon shadows of the forest something moved. For an instant he saw it clearly—a malevolent pgymy like the cat-eyed horror he had glimpsed drinking from the stream. Like it? No, the same; it must be the same, for here on Austin no creature resembled another, nor ever could, save by the wildest of chances.

The creature vanished before he could draw his weapon, but in the shadows lurked other figures, other eyes that seemed alight with nonhuman intelligence. He fired, and a curious squawling cry came back, and it seemed to him that the forms receded for a time. But they came again, and he saw without surprise the nightmare horde of creatures.

VIII.

HE stuffed the notebook in his pocket and seized Lilith's wrist, for she stood as if paralyzed by horror. He backed away, out of the doorless entrance, over the narrow brook. The girl seemed dazed, half hypnotized by the glimpses of the things that followed them. Her eyes were wide with fear, and she stum-

bled after him unseeing. He sent another shot into the shadows.

That seemed to rouse Lilith. "*Lay shot!*" she whimpered, then gathered her self-control. She uttered her curious call, and somewhere it was answered, and yet further off, answered again.

Her pack was gathering for her defense, and Carver felt a surge of apprehension for his own position. Might he not be caught between two enemies?

He never forgot that retreat down the course of the little stream. Only delirium itself could duplicate the wild battles he witnessed, the unearthly screaming, the death grips of creatures not quite natural, things that fought with the mad frenzy of freaks and outcasts. He and Lilith must have been slain immediately save for the intervention of her pack; they slunk out of the shadows with low, bestial noises, circling Carver cautiously, but betraying no scrap of caution against—the other things.

He saw or sensed something that had almost escaped him before. Despite their forms, whatever their appearance happened to be, Lilith's pack was dog-like. Not in looks, certainly; it was far deeper than that. In nature, in character; that was it.

And their enemies, wild creatures of nightmare though they were, had something feline about them. Not in appearance, no more than the others, but in character and actions. Their method of fighting, for instance—all but silent, with deadly claw and needle teeth, none of the fencing of canine nature, but with the leap and talons of feline. But their aspect, their—their *catness* was more submerged by their outward appearance, for they ranged from the semi-human form of the little demon of the brook to ophidian-headed things as heavy and lithe as a panther. And they fought with a ferocity and intelligence that was itself abnormal.

Carver's gun held. He fired when

he had any visible target, which was none too often; but his occasional hits seemed to instill respect into his adversaries.

Lilith, weaponless save for stones and her wooden knife, simply huddled at his side as they backed slowly toward the beach. Their progress was maddeningly slow, and Carver began to note apprehensively that the shadows were stretching toward the east, as if to welcome the night that was sliding around from that half of the world. Night meant—destruction.

If they could attain the beach, and if Lilith's pack could hold the others at bay until Carver could build a fire, they might survive. But the creatures that were allied with Lilith were being overcome. They were hopelessly outnumbered. They were being slain more rapidly with each one that fell, as ice melts more swiftly as its size decreases.

Carver stumbled backward into orange-tinted sunlight. The beach! The sun was already touching the coral spit, and darkness was a matter of minutes—brief minutes.

OUT OF THE BRUSH came the remnants of Lilith's pack, a half-dozen nondescripts, snarling, bloody, panting, and exhausted. For the moment they were free of their attackers, since the catlike fiends chose to lurk among the shadows. Carver backed farther away, feeling a sense of doom as his own shadow lengthened in the brief instant of twilight that divided day from night in these latitudes. And then swift darkness came just as he dragged Lilith to the ridge of the coral spit.

He saw the charge impending. Weird shadows detached themselves from the deeper shadows of the trees. Below, one of the nondescripts whined softly. Across the sand, clear for an instant against the white ground coral of the beach, the figure of the small devil with the half-human posture showed, and a

malevolent sputtering snarl sounded. It was exactly as if the creature had leaped forward like a leader to exhort his troops to charge.

Carver chose that figure as his target. His gun flashed; the snarl became a squawl of agony, and the charge came.

Lilith's pack crouched; but Carver knew that this was the end. He fired. The flickering shadows came on. The magazine emptied; there was no time now to reload, so he reversed the weapon, clubbed it. He felt Lilith grow tense beside him.

And then the charge halted. In unison, as if at command, the shadows were motionless, silent save for the low snarling of the dying creature on the sand. When they moved again, it was away—toward the trees!

Carver gulped. A faint shimmering light on the wall of the forest caught his eye, and he spun. It was true! Down the beach, down there where he had left his box of supplies, a fire burned, and rigid against the light, facing toward them in the darkness, were human figures. The unknown peril of fire had frightened off the attack.

He stared. There in the sea, dark against the faint glow of the west, was a familiar outline. The *Fortune*! The men there were his associates; they had heard his shots and lighted the fire as a guide.

"Lilith!" he choked. "Look there. Come on!"

But the girl held back. The remnant of her pack slunk behind the shelter of the ridge of coral, away from the dread fire. It was no longer the fire that frightened Lilith, but the black figures around it, and Alan Carver found himself suddenly face to face with the hardest decision of his life.

He could leave her here. He knew she would not follow, knew it from the tragic light in her honey-hued eyes. And beyond all doubt that was the best thing to do; for he could not marry

her. Nobody could ever marry her, and she was too lovely to take among men who might love her—as Carver did. But he shuddered a little as a picture flashed in his mind. Children! What sort of children would Lilith bear? No man could dare chance the possibility that Lilith, too, was touched by the curse of Austin Island.

He turned sadly away—a step, two steps, toward the fire. Then he turned.

“Come, Lilith,” he said gently, and added mournfully, “Other people have married, lived, and died without children. I suppose we can, too.”

IX.

THE FORTUNE slid over the green swells, northward toward New Zealand. Carver grinned as he sprawled in a deck chair. Halburton was still gazing reluctantly at the line of blue that was Austin Island.

“Buck up, Vance.” Carver chuckled. “You couldn’t classify that flora in a hundred years, and if you could, what’d be the good of it? There’s just one of each, anyway.”

“I’d give two toes and a finger to try,” said Halburton. “You had the better part of three days there, and might have had more if you hadn’t winged Malloa. They’d have gone home to the Chathams sure, if your shot hadn’t got his arm. That’s the only reason they made for Macquarie.”

“And lucky for me they did. Your fire scared off the cats.”

“The cats, eh? Would you mind going over the thing again, Alan? It’s so crazy that I haven’t got it all yet.”

“Sure. Just pay attention to teacher and you’ll catch on.” He grinned. “Frankly, at first I hadn’t a glimmering of an idea myself. The whole island seemed insane. No two living things alike! Just one of each genus, and all unknown genera at that. I didn’t get a single clue until after I met Lilith.

Then I noticed that she differentiated by smell. She told good fruits from poisonous ones by the smell, and she even identified that first cat-thing I shot by smell. She’d eat that because it was an enemy, but she wouldn’t touch the dog-things I shot from her pack.”

“So what?” asked Halburton, frowning.

“Well, smell is a chemical sense. It’s much more fundamental than outward form, because the chemical functioning of an organism depends on its glands. I began to suspect right then that the fundamental nature of all the living things on Austin Island was just the same as anywhere else. It wasn’t the *nature* that was changed, but just the *form*. See?”

“Not a bit.”

“You will. You know what chromosomes are, of course. They’re the carriers of heredity, or rather, according to Weissman, they carry the genes that carry the determinants that carry heredity. A human being has forty-eight chromosomes, of which he gets twenty-four from each parent.”

“So,” said Halburton, “has a tomato.”

“Yes, but a tomato’s forty-eight chromosomes carry a different heredity, else one could cross a human being with a tomato. But to return to the subject, all variations in individuals come about from the manner in which chance shuffles these forty-eight chromosomes with their load of determinants. That puts a pretty definite limit on the possible variations.

“For instance, eye color has been located on one of the genes on the third pair of chromosomes. Assuming that this gene contains twice as many brown-eye determinants as blue-eye ones, the chances are two to one that the child of whatever man or woman owns that particular chromosome will be brown-eyed—if his mate has no marked bias either way. See?”

"I know all that. Get along to Ambrose Callan and his notebook."

"COMING TO IT. Now remember that these determinants carry *all* heredity, and that includes shape, size, intelligence, character, coloring—everything. People—or plants and animals—can vary in the vast number of ways in which it is possible to combine forty-eight chromosomes with their cargo of genes and determinants. But that number is not infinite. There are limits, limits to size, to coloring, to intelligence. Nobody ever saw a human race with sky-blue hair, for instance."

"Nobody'd ever want to!" grunted Halburton.

"And," proceeded Carver, "that is because there are no blue-hair determinants in human chromosomes. But—and here comes Callan's idea—suppose we could increase the number of chromosomes in a given ovum. What then? In humans or tomatoes, if, instead of forty-eight, there were four hundred eighty, the possible range of variation would be ten times as great as it is now.

"In size, for instance, instead of the present possible variation of about two and a half feet, they might vary twenty-five feet! And in shape—a man might resemble almost anything! That is, almost anything within the range of the mammalian orders. And in intelligence——" He paused thoughtfully.

"But how," cut in Halburton, "did Callan propose to accomplish the feat of inserting extra chromosomes? Chromosomes themselves are microscopic; genes are barely visible under the highest magnification, and nobody ever saw a determinant."

"I don't know how," said Carver gravely. "Part of his notes crumbled to dust, and the description of his method must have gone with those pages. Morgan uses hard radiations, but his object and his results are both

different. He doesn't change the number of chromosomes."

He hesitated. "I think Callan used a combination of radiation and injection," he resumed. "I don't know. All I know is that he stayed on Austin four or five years, and that he came with only his wife. That part of his notes is clear enough. He began treating the vegetation near his shack, and some cats and dogs he had brought. Then he discovered that the thing was spreading like a disease."

"Spreading?" echoed Halburton.

"Of course. Every tree he treated strewed multi-chromosomed pollen to the wind, and as for the cats—— Anyway, the aberrant pollen fertilized normal seeds, and the result was another freak, a seed with the normal number of chromosomes from one parent and ten times as many from the other. The variations were endless. You know how swiftly kauri and tree ferns grow, and these had a possible speed of growth ten times as great.

"The freaks overran the island, smothering out the normal growths. And Callan's radiations, and perhaps his injections, too, affected Austin Island's indigenous life—the rats, the bats. They began to produce mutants. He came in 1918, and by the time he realized his own tragedy, Austin was an island of freaks where no child resembled its parents save by the merest chance."

"His own tragedy? What do you mean?"

"WELL, Callan was a biologist, not an expert in radiation. I don't know exactly what happened. Exposure to X rays for long periods produces burns, ulcers, malignancies. Maybe Callan didn't take proper precautions to shield his device, or maybe he was using a radiation of peculiarly irritating quality. Anyway, his wife sickened first—an ulcer that turned cancerous.

"He had a radio—a wireless, rather, in 1921—and he summoned his sloop from the Chathams. It sank off that coral spit, and Callan, growing desperate, succeeded somehow in breaking his wireless. He was no electrician, you see.

"Those were troubled days, after the close of the War. With Callan's sloop sunk, no one knew exactly what had become of him, and after a while he was forgotten. When his wife died, he buried her; but when he died there was no one to bury him. The descendants of what had been his cats took care of him, and that was that."

"Yeah? What about Lilith?"

"Yes," said Carver soberly. "What about her? When I began to suspect the secret of Austin Island, that worried me. Was Lilith really quite human? Was she, too, infected by the taint of variation, so that her children might vary as widely as the offspring of the—cats? She spoke not a word of any language I knew—or I thought so, anyway—and I simply couldn't fit her in. But Callan's diary and notes did it for me."

"How?"

"She's the daughter of the captain of Callan's sloop, whom he rescued when it was wrecked on the coral point. She was five years old then, which makes her almost twenty now. As for language—well, perhaps I should have rec-

ognized the few halting words she recalled. *C'm on*, for instance, was *comment*—that is, 'how?' And *pah bo* was simply *pas bon*, not good. That's what she said about the poisonous fruit. And *lay shot* was *les chats*, for somehow she remembered, or sensed, that the creatures from the eastern end were cats.

"About her, for fifteen years, centered the dog creatures, who despite their form were, after all, dogs by nature, and loyal to their mistress. And between the two groups was eternal warfare."

"But—are you *sure* Lilith escaped the taint?"

"Her name's Lucienne," mused Carver, "but I think I prefer Lilith." He smiled at the slim figure clad in a pair of Jameson's trousers and his own shirt, standing there in the stern looking back at Austin. "Yes, I'm sure. When she was cast on the island, Callan had already destroyed the device that had slain his wife and was about to kill him. He wrecked his equipment completely, knowing that in the course of time the freaks he had created were doomed."

"Doomed?"

"Yes. The normal strains, hardened by evolution, are stronger. They're already appearing around the edges of the island, and some day Austin will betray no more peculiarities than any other remote islet. Nature always reclaims her own."





Urgently, Jay Kalam inquired: "Giles, can't you do it?"

The Cometeers

(Conclusion)

by Jack Williamson

UP TO NOW:

"STEPHEN ORCO must be killed!"

That grim, apparently hopeless purpose drives four members of the legion of space—lean, young Bob Star; the

legion's grave, scholarly commander, Jay Kalam; powerful Hal Samdu; and fat old Giles Habibula—into the strange peril of the comet.

So, for want of a better word, the startled astronomers of the thirtieth cen-

tury had termed it. A colossal cloud of shining green, twelve million miles long, it came out of space, controlled like a ship.

Man's amazement changed to panic as invisible raiders—the Cometeers—carried off Stephen Orco. A brilliant, mysterious rebel, he had been the system's most dangerous prisoner—dangerous because he had discovered the secret of AKKA.

AKKA is the symbol for humanity's secret weapon. Its keeper, with a simple instrument, can destroy any object in the universe—by so altering the warp of space that matter and energy cannot exist within it. The only possible barrier is the counter-warp, by whose means any master of the principle can prevent all destructive use of the weapon.

Bob Star's mother, lovely Aladoree, is keeper of AKKA. Her husband, John Star, has taken her into hiding from Stephen Orco. For he, now at liberty, means to murder her, to make himself sole master of AKKA.

Bob Star has sworn to kill Stephen Orco. But he fears that he will be unable to do it, because of a singular, painful injury which Stephen Orco has inflicted on his brain with the dread omega ray. He blames himself for the prisoner's escape.

Entering the comet to seek Stephen Orco, the four legionnaires are joined by a lovely, mysterious girl, Kay Nymidee, with whom Bob Star falls in love. She tries to aid the four, to give them some important message. But they cannot understand her language.

They find the comet a swarm of planets, within the green cloud. The Cometeers are raiders of space. Their tremendous science drives the comet from sun to sun, drags captured planets into the swarm. Their uncanny, vampiric lives are fed upon the luckless inhabitants.

The five are upon the jewellike, indigo surface that armors the master planet,

when one of the Cometeers appears beside them. Bob Star tries in vain to destroy its shining, supermaterial body with his proton guns.

Out of the pillar of its shining mist speaks Stephen Orco's mocking voice: "You had your chance to kill me, Bob. But now I've a body that cannot be destroyed."

The dread voice tells him that his mother has been captured, and is being brought into the comet.

"Her life," it says, "is the only barrier before me, now."

XXIII.

BOB STAR woke from a singular dream.

In the dream he had thought that his body had been exchanged for the shining form of one of the Cometeers. And this bodiless entity—himself—was flying through the green vacancy of the comet's interior. Ahead of him, fleeing in a similar shining guise, was Stephen Orco.

This Stephen Orco, of the dream, was carrying away a woman. He was going to consume her—dreadfully, so that only a shrunken husk would be left, bleached, wrinkled, hideous. And even the whimpering husk would die, and crumble to iridescent ash and fluid.

Sometimes the woman was his mother, and sometimes she was golden-eyed Kay Nymidee.

Somehow, in his bodiless form, Bob Star carried a weapon. He had no picture of its shape, but it was something that could destroy Stephen Orco and save the changing woman.

But a terrible fear was beating him down, out of the green abysm. His shining shape was reeling under the incessant blows of a great red hammer of pain. And ancient, haunting terror screamed at him: "You can't! You can't kill him!"

He woke, and knew that it was the

low, anxious voice of Kay Nymidee that had roused him.

"*Sa daspetel!*" she was urging. "*Sa daspetel!*"

He realized that he was lying down, with his head on her knees. Her cool, firm hands were on his forehead; they seemed to soothe the eternal pain behind the scar. The hard polish of the planet's indigo surface was under his body.

He blinked against the singular dullness of his vision. He tried to sit up, and discovered the curiously unpleasant, prickling numbness of his body. It was the same feeling, he thought, that previously had followed the paralysis and unconsciousness induced by the Cometeers——

Hideous as a nightmare, piercingly real as the gray chill of winter rain, recollection returned.

And his dream, he knew, reflected bitter truth—save that his frail human body was no match for Stephen Orco's shining form, and that he had no weapon that could possibly destroy the other.

ONCE AGAIN he heard the reckless, boasting mockery of Stephen Orco's voice, pealing out of that upright pillar of spinning mist: "Yes, Bob, this is I."

He heard a chuckle, light, careless, indifferent.

"You needn't try to express your surprise, Bob. Your face makes it evident. And I must admit that the surprise is mutual. The discovery of your uninvited presence in the comet has caused a certain consternation among my associates, which they will take steps to relieve.

"For my part, Bob, I am not anxious to hasten your destruction, for I value you as my oldest enemy. You have been my enemy, Bob, since I was a lonely, orphaned child, and my foster father told me of you, another child, who would one day inherit a name and a

wealth and a power that would make you supreme in the system."

That voice had become suddenly savage, with a black and ancient hate.

"From that hour, Bob, we have been enemies. From that hour I have lived to crush you and take that heritage from you. It's really mine as much as yours; I might have been born John Star's son, as well as you. I might have brought more honor to the name, Bob, than the weakling you have been.

"I'm not going to hasten your destruction, Bob," the voice from the swirling flame went on. "A ship is coming for you and your companions. You will be taken, along with a load of the prisoners from Pluto, down into the center of the planet.

"And ultimately——

"Have you ever watched the Cometeers feed, Bob? Well, you will."

There was a pause, and the light voice went on, tinged with malicious mockery: "There is one fact, Bob, that I wish to impress upon you. I believe that reflection upon it will sweeten the days that are before you, Bob. And before you die, I wish you to know well the taste of helpless futility that was mine when I was a child, Bob.

"I assume from your presence in the comet that you and your motley companions have still cherished the thought of killing me—in spite of the fact you have proved you couldn't kill me, Bob, when all you had to do was to press a little red button; and the fact that Commander Kalam has given his word to protect my life under all circumstances.

"But what I wish to impress upon you, Bob, is this: *I can't be killed!*

"I see upon your face your admiration of my new physical equipment. It is far superior to the old, on both æsthetic and utilitarian grounds. It has certain great powers; space is no barrier to it; neither is any material wall. But its most important feature is that it cannot be destroyed.

"My new body is immortal, truly eternal. It has mass and potential energy. But its mass is in no form you know as matter, Bob, and its energy is beyond the comprehension of your physics. Not even the power of AKKA could destroy it, Bob.

"These deathless embodiments of intelligence are the supreme accomplishments of my new associates, Bob. You had not guessed that they were artificial?

"But the drivers of the comet once were beings of flesh. They were not far different, perhaps, from mankind. But they wearied of frailty, incapacity, death. And they called upon their high science for a means of transferring their minds to eternal constructs of vibration.

"For a mind is but a synaptic pattern. It is a mind, whether its physical medium be fragile, neurone fibers or eternal etheric vortexes.

"The Cometeers were glad to make me one of their number, if only to make themselves more secure in the protection I could offer from your mother's weapon. AKKA could destroy the comet, greatly inconvenience the Cometeers, even if it could not directly annihilate their bodies.

"And now, Bob"—the light voice mocked him—"I shall be forced to leave you. For your parents, as I told you, are being brought into the comet. I must go to welcome your mother."

Stephen Orco chuckled at the mute agony that twisted Bob Star's face.

"I wish to discuss with her the principle of AKKA. There are points not clear from my own research. And when our discussions are ended, Bob—

"Well, it is an imperfection of my new body, Bob, that it cannot subsist entirely upon dead elements. It must assimilate living organisms. It consumes not the chemical elements alone, but the vital essence, the mind, the soul. Life must ever perish without life, Bob.

"Perhaps, Bob, if your mother is unwilling to tell me what I wish to know,

I can still learn it—after her mind is part of me.

"Have you seen what is left after one of the Cometeers has fed, Bob? Can you see your mother so? As small as a child, shriveled, colorless, whimpering for death—"

And, as the fog of the strange paralysis closed upon Bob Star and smothered his consciousness, the voice had faded.

BOB STAR struggled again; the eager hands of Kay Nymidee helped him to sit up upon the cold, violet-blue flatness of the master planet. His clearing eyes blinked this way and that at the pale-green sky, at the huge purple disk of the heatless sun, at the many-hued disks of the clustered worlds, fixed in the green.

The two improvised sledges were close beside him. Jay Kalam, Hal Samdu and Giles Habibula were unpacking them hastily, flinging aside one after another the spare proton guns and extra cells they had carried.

"Ah, so," Bob heard Giles Habibula wheeze mournfully. "The mortal monster ruined them, every one, like my blessed geodynes aboard the *Halcyon Bird*!"

His small, round eyes saw Bob Star, and momentarily brightened.

"Ah, lad, old Giles is glad to see you up again," he said cheerfully. "We thought you would never wake. It must have given you a mortal heavy dose—"

His voice broke off, as Hal Samdu rumbled, alarmed: "There! It must be the ship he said was coming for us."

Lurching stiffly to his feet, Bob Star peered into the green sky.

He saw a flying thing slanting toward them. It was a thick, horizontal disk. It gleamed red, metallic, like the colossal machine looming above the indigo plain. Dark, circular ports were becoming visible in its wide, glistening edge.

Its upper side formed a circular, railed

deck. In the center of this deck was a low, red dome, thickly studded with ports. There was no roar of rockets, nor any visible mechanism of propulsion. It would be moved—Bob Star recalled Jay Kalam's supposition—by fields of invisible force, reacting against the planet.

The tall commander had straightened beside him to look at the ship. Bob Star caught apprehensively at his arm.

"What," he whispered hoarsely, "can we do?"

"Nothing," said Jay Kalam's calm voice, wearily, "but try to preserve our lives by watching for some chance—some miracle of fate. For so long as we live——"

The red disk came down gently upon the violet-blue level, at some little distance. The deceptive conditions made distance and size difficult to estimate, but Bob Star realized that the disk was much larger than he had at first supposed.

"It is very hard to believe," the commander's voice was saying beside him, very soft, very tired, "that we are not utterly defeated. It seems that no weapon a man ever used could kill Stephen Orco now. And it seems that now we are to be prisoners, and soon—destroyed."

The clang of some metal thing—perhaps the cover of a sort of hatch—jerked Bob Star from the apathy of despair. He heard raucous hoots and answering reverberations that were like the booming of great drums. These were the same uncanny sounds, he realized, that he had heard from the invisible ship which carried Stephen Orco away from Neptune.

A great square opening gaped suddenly black in the crimson side of the disk. A square door had fallen outward to form an inclined gangway. Marching down that incline came monstrous things.

No longer—despite the unsolved

enigma of Kay Nymidee's humanity—did Bob Star expect to find beings like men within the comet. Yet he was not prepared for the mind-shaking impact of the things that came down the gangway.

THERE WERE eight of them, of three different sorts.

The foremost was a ten-foot sphere of white, silvery metal, surrounded with a dark equatorial band. At first Bob Star thought that it was rolling; then he saw that only the band turned, sliding about the globe. Each pole was a dark, glittering bulge that looked like a faceted eye. About each bulge were spaced three long, gleaming metallic tentacles, now coiled close to the hemispheres.

The two creatures behind were shaped like slender cones, nearly twenty feet high. They were bright-green; their skins had an oily luster. Their bases, apparently, were elastic, inflated membranes, expanded to hemispheres, upon which they bounded forward with a curious, astounding agility. The slender upper parts of the cones were flexible, like necks. The dark, pointed organs that tipped them turned this way and that, like singular heads.

Green cones bouncing upon distended bases! They looked like grotesque nursery toys; but their grotesquery held the essence of horror.

The remaining five were slender tripod giants. Their lean bodies, vaguely suggestive of the human, stood perhaps fifteen feet tall. They were covered with a dully glistening, dark-red armor, like the chitin of gigantic insects. Their tapering lower limbs were many-jointed, so that they resembled stiff tentacles.

Each bore six upper limbs, very long, slender, also many-jointed, forming a kind of fringe about the upper part of the crimson-armored body. Where the head should have been was a cluster

of stalked organs, shimmering with bright colors.

Their lean bodies supported a kind of golden harness, to which was slung a variety of curious implements or weapons of some yellow metal.

"Mortal me!" gasped Giles Habibula, his small eyes round with apprehensive wonder, "are these mortal things the lords of the comet—and not the shining monsters?"

The commander was watching their approach, his dark eyes grave.

"No," his quiet voice said slowly. "I imagine that these creatures are the slaves of the Cometeers. In the ages they have roved the universe they must have conquered many planets inhabited by intelligent life. They must have preserved a few of the higher forms to serve them."

His low voice fell into the silence of dread as the alien creatures came on.

The white sphere turned a little aside and halted, resting on the dark belt. Hoarse, raucous hoots came from it—like commands.

The green cones answered with dull, booming reverberations that seemed to come from their inflated pedal membranes. The scarlet, three-legged creatures made no sound. But they came, with the cones, on past the motionless sphere, and spread out as if to encircle the five by the sledges.

Bob Star jerked himself out of his trance of horror and fumbled for his proton guns.

"Wait, Bob," advised Jay Kalam, wearily. "Our weapons have all been ruined. We can't resist——"

"But, Jay," protested Hal Samdu, "we can't give up without a fight."

"We must," Jay Kalam insisted quietly. "We must preserve our lives and hope for some opportunity——"

The giant made a mute, hurt sound. "The legion?" he rumbled incredulously. "Surrender?"

Catching up a dead proton gun like

a club, Hal Samdu strode grimly to meet the nearest bounding, green cone.

"No!" his deep tones came back. "Not when Aladoree is in danger——"

Tense, urgent, the voice of Kay Nymidee rang after them: "*Pahratee!*"

She hastened after Hal Samdu, as if to catch his arm.

But she was too late. The thin, flexible, upright tip of the green cone whipped over toward Hal Samdu. From the dark, pointed organ at the tip of it—which was like a head—flashed a thin, blinding ray of orange light.

Hal Samdu crumpled, groaning with helpless agony.

"We can't resist," repeated Jay Kalam. "Help me carry him, Bob. We'll go aboard—if that's what they want us——"

His quiet voice broke off with a sudden, suppressed exclamation. And Bob Star was amazed when he turned and spoke to Kay Nymidee with strange words as soft and liquid-toned as her own.

XXIV.

THE PRISON HOLD was a vast space, filling nearly all the lowest level of the disk ship. The circle of it—perhaps five hundred feet in diameter—was broken only by a doorless wall—perhaps inclosing engine rooms—which shut off a part of the center.

There were no ports giving directly upon the hold, and the only light was a harsh red glare that was reflected downward from the high metal ceiling. The ventilation was not good; sanitary conveniences were few.

The entrance was a massive grille of red metal bars at the top of a long ramp. One of the white spheres remained on guard beyond the grille, but none of the cometary beings was within the hold.

The five new prisoners had been pushed through the door and left upon the ramp within. Examining Hal Samdu—who was still unable to speak

or to sit up—Bob Star and Giles Habibula found only a superficial injury—a small, circular, inflamed patch on his temple.

"The orange ray didn't come out of a weapon," Bob Star said. "It was projected out of the cone thing's head."

"Ah, 'tis a mortal strange world," sighed Giles Habibula, in a melancholy tone. "And we're all in a mortal evil plight! Anyhow"—and his voice grew brighter—"I think poor Hal is no more than stunned. He'll soon be himself again."

Bob Star and Jay Kalam had attempted to carry him as they came aboard. But one of the thin red giants had taken the limp body from them, in its six many-jointed arms. They had meekly followed it into the ship.

The miserable thousands imprisoned in the hold were mostly sitting or lying on the bare red metal of the floor. They were clad in haphazard fragments of clothing; only a few had odd little bundles of their possessions. Their unwashed faces were haggard with fatigue and despair, and the sound that rose up from all of them was a weary murmur of hopeless apathy, without any light or laughter.

Bob Star walked down the ramp, and was accosted by a gaunt, gray-faced man who had been stalking grimly, like a tired specter, across the great floor, stepping over recumbent bodies to look at the face of every slumbering or weeping child.

"Have you seen my son?" he asked rustily. "A blue-eyed lad, with curly yellow hair. His name is John—after the great John Star. Have you seen him?"

Bob Star shook his head, and saw hope again extinguished by gray despair.

"Where do you come from?" he asked.

"From Pluto." The bloodshot, dark-ringed eyes looked at him with a weary, mute curiosity. "My name is Hector

Valdin," he said heavily. "I was a worker in the platinum mines of Votanga."

His gnarled hand made a slow, weary gesture.

"These people all came from Votanga, on Pluto. They are my friends and neighbors. The men used to work with me in the mines. And now——"

His throat worked convulsively.

"What happened?" asked Bob Star.

"Don't you know?" The dull eyes were still curious. "Well, they say invisible ships destroyed the legion patrol and the bases. And Pluto came away from the Sun and into the green comet."

His teeth ground together in sudden, savage pain.

"And then these monsters came and herded us into this ship. They burned our houses to drive out our women and children, so that they could catch them. They're taking us somewhere. I don't know where. Nobody knows."

"My son John is lost." The red eyes came pleadingly back to Bob Star's face. "You haven't seen a little blue-eyed lad——"

THIS, Bob Star was thinking bitterly, was the fate of the colonists. To be snatched unawares out of peaceful homes and dragged away like bewildered cattle to feed the vampiric Cometeers. It was the fate awaiting all humanity.

Thinking vaguely of escape, he asked: "Do the monsters ever come in here? Do they ever open the door?"

Hector Valdin shook his head, dully.

"They never come down among us. The door has not been opened since we were put on the ship, save to admit you."

"How do they clean the floor and feed the prisoners?"

"They don't clean the floor," Hector Valdin said. "And the only food they give us is a sour liquid that runs into troughs by the wall."

The tired, hopeless eyes scanned Bob

Star again with a weary wonderment.

"Where was your home?" he asked heavily. "I think I never saw you in Votanga. And who are those with you? How was the big man hurt?"

Appearing hardly to hear him, Bob Star had looked away from him, across the hopeless, murmuring misery of the thousands sitting and lying on the floor, and then back at the massive locked grating at the top of the ramp.

"Well," said Hector Valdin slowly, as he paused, "I must go on to look for my son John——"

A sudden blue light had come into Bob Star's eyes. And a curious grim smile had come over his lean face—a hard and dangerous smile.

"Wait, Hector Valdin," he said in a voice with a bright, eager ring, "I'll tell you who we are and how we came to be in this prison ship——"

The gaunt man shook his haggard head.

"No," he said wearily, "it doesn't matter. I must find John."

"Wait!" Bob Star called urgently. "If you honor the name of John Star——"

And Hector Valdin came back, with a little of the leaden apathy already lifted from his gray face.

And others, near at hand, lifted their heads and began to listen. For Bob Star's voice rang strong with an urgent, compelling eagerness. And he spoke magic names, a magic symbol, out of glorious history.

" . . . Jay Kalam, who is commander of the legion. . . . The big man, just sitting up, is Hal Samdu, who went with my father and the others out to Yarkand. . . . Giles Habibula—he can open that door, to let us out into the ship! . . . My mother, the keeper of AKKA. She is a prisoner, now, about to be murdered. . . ."

Bob Star talked on. He groped for stirring words. He was a little surprised at the confidence, the ringing strength, in his voice. For in his heart

he knew there was no hope. He knew that they were all doomed prisoners.

And he knew that Stephen Oroo could not be killed.

Soon many men were listening to him. A quick interest was penetrating the leaden despair upon their weary faces. And the bright finger of hope transfigured now one and now another.

THE first conversation of Jay Kalam and Kay Nymidee was extended, and singularly difficult to interrupt. It had begun out upon the jewel-smooth armor of the planet, when the girl called out for Hal Samdu to stop, and the surprised commander addressed her in her own language.

Ever since her arrival upon the asteroid she had been struggling to communicate something to the others, had evidently been very much bewildered by their failure to comprehend. When, at last, the unexpected opportunity came, she welcomed it very eagerly.

Her face shone with sudden delight. She ran joyously to the grave, tall commander and threw her slim arms about him. She lifted on tiptoe to kiss both his lean cheeks.

Then, ignoring the alien monsters herding them into the ship, she was talking to him furiously. And he replied, awkwardly, difficultly, but as if he understood.

They were not interrupted when their captors pushed them into the prison hold and locked the massive grate behind them. They stood upon the ramp within, oblivious of their surroundings. Kay Nymidee talked very fast, in a clear, melodious voice. Her white face showed much play of expression, smiling with joy, frowning with the effort of making her meaning clear; it was bright with hope, shadowed with apprehension. She gestured, speaking with her whole pliant body.

Jay Kalam's lean, dark face, in contrast, was very still; but the bright in-

tensity of his dark eyes revealed his eagerness. For the most part he listened, his dark brow furrowed a little with the effort of comprehension. Frequently, he interrupted the girl's ardent discourse, to make her repeat something more slowly or to ask some halting question.

Bob Star came to them more than once, and went away again when they appeared unconscious of everything but their talk. Men were following him, now, led by wondrous words that were golden banners blowing. It still amazed him that they should, for he knew that he was only a boy—afraid and half ill with the pain of a strange and ancient injury. But they did, and he went on, rejoicing in the magic power of those words.

And when he came again, Kay Nymidee turned eagerly toward him to speak, and looked as much disappointed as ever at his failure to understand.

"She's asking," Jay Kalam told him, "if you know Spanish."

"Spanish?" echoed Bob Star, astounded.

"Yes. That's her language."

"Spanish? How does she know Spanish?" He was bewildered. "Isn't she a native of the comet?"

"She is," said the commander, gravely. "But her race isn't. I told you how improbable——"

"How does that happen? How did her people get into the comet?"

Jay Kalam stroked at the dark angle of his jaw.

"It's an odd story," he said. "But credible enough, with what we know of the Cometeers. The bare outline is all I have. Kay's Spanish, you see, and mine are almost two different languages. Mine is due to an interest in the plays of Lope de Vega, who wrote fourteen hundred years ago. Hers is the Spanish of a thousand years later, still farther changed by four hundred years of adap-

tation to an alien environment. Her accent is so unfamiliar that it is the merest accident that I recognized her tongue at all. If she hadn't called out to Hal Samdu to stop——

"And her scientific words, of course, are nearly all totally unfamiliar. That makes her message peculiarly difficult to understand."

"FOUR HUNDRED YEARS?"

Bob Star had caught at a phrase. "You mean that her people have been in the comet that long?"

"You may recall from your history, Bob," Jay Kalam explained deliberately, "that during the latter part of the twenty-sixth century the Argentine Republic passed through a brief Golden Age. For a few years, in science and nearly all the arts, as well as in wealth and military power, it was the leading nation of Earth.

"The climax of that splendid era was the Conquistador Expedition. In the greatest geodesic cruiser that had ever been built a hundred men and women left Buenos Aires upon what was designed to be the system's greatest voyage of science and exploration.

"The Conquistador never returned.

"The hundred had been the intellectual flower of the republic. Their loss was a blow that shattered the Golden Age. The northern races resumed their supremacy with the turn of the century, and Spanish is now almost a dead language."

"The Conquistador——" Bob Star began the question.

"It was captured by the Cometeers."

Amazed, incredulous, he demanded: "Four hundred years ago?"

"So Kay tells me," said Jay Kalam. "Apparently their ships were continually sent ahead, at speeds far beyond that of light, on scouting expeditions. Most suns, you know, have no planets at all, and so aren't worth raiding.

"And the invisible scout, it seems,

met the Conquistador, out beyond Pluto. Her entire crew was carried back to the comet, which was then in a remote part of the galaxy.

"The prisoners were kept alive to be questioned and studied; and eventually a few of them escaped from the laboratories of the Cometeers. Aided by other beings who had been enslaved by the *aythrin*, they got away from the master planet in a captured ship, and reached one of the outlying planets of the cluster.

"For two generations they existed as miserable fugitives, until the survivors found their way into a great cavern, where they were not discovered.

"The human beings still clung to their knowledge of science. They were the finest specimens of a brilliant era. They had learned of the doom already overshadowing the unsuspecting system, and they determined to prevent it.

"They were aided by the science of the strange slaves who had escaped with them.

"And Kay Nymidee is their daughter—after four hundred years.

"The secret colonists made scientific progress. The projector by whose means Kay appeared to you on Neptune, and came to the asteroid, is their most brilliant achievement. I understand her explanation very imperfectly, but apparently it operates by warping the world lines of the continuum to bring two remote points so close together in hyperspace that light—or even, finally, a material body—can leap across the gap.

"The machine, anyhow, was developed by Kay's father. And he had been operating it and sending Kay into the hidden places of the Cometeers, after their secrets. They detected it after she tried to warn you, on Neptune. They located the cavern, and destroyed the inhabitants.

"Kay Nymidee is the only one who escaped. At the last moment, her father

used the machine to send her to you, upon the asteroid. He remained to perish."

Bob Star caught eagerly at his arm.

"What has she been trying to tell us?" he gasped abruptly. "About Stephen Orco and the *aythrin*? Had she—had she learned anything?"

With a grave, maddening deliberation, Jay Kalam nodded.

"Yes," he said. "The Cometeers can be destroyed. That's what she has been trying to tell us."

SUDDEN HOPE shook Bob Star like a wind.

"Destroyed?" he whispered, faintly. "Stephen Orco can be killed?" Urgently he demanded, "How?"

The commander slowly shook his head.

"Kay doesn't know. She knows only that a means exists—and that it is the most closely guarded secret of the Cometeers.

"She says the Cometeers are ordinarily immortal, as Stephen Orco told us," Jay Kalam added. "But their rulers possess some instrumentality for their destruction. It is necessary for purposes of discipline, and to eliminate undesirables from among them.

"Kay has no idea what that agency is; it is guarded even from the mass of the *aythrin*. But she does know where the secret is kept!"

Bob Star fixed in a breathless tension.

"Where?"

"It is guarded at the center of this planet. You remember Kay's drawing?

"Well, this planet is a world truly dead—cold to the center. It is honeycombed with cavernous hollows; we might have suspected that from its low mean density. The chief stronghold of the Cometeers, where they guard this precious agency, is in the hollow center of the planet.

"She has been trying to guide us to it."

Bob Star stood silent for a little time, frowning reflectively.

"I've been trying——" he began, and broke off suddenly, biting his lip.

"The information is very useful to us," he said with a bitter irony, "when we are prisoners, unarmed and condemned! When the thing we must have to kill Stephen Orco is in the middle of an armored planet, beneath fifteen thousand miles of rock, and guarded with all the strange science of the Cometeers!"

Looking at him, Kay Nymidee spoke again insistently, in her soft, liquid voice.

"Kay still wants to know," Jay Kalam said, "if you speak any Spanish."

Bob Star shook his head.

"But I'm going to learn," he said eagerly. "Tell her that. If——"

His voice stilled to ruthless apprehension.

XXV.

BOB STAR was never satisfied with his part in the rebellion of the prisoners. True, the plan of action—if anything so vague, so wild, so desperately hopeless could be called a plan—was his. And it was he, at last, who led the rush from the hold.

But those few mad seconds never contented him.

Hector Valdin had gone with him through the weary apathy of the prison hold. He had introduced Bob Star to his fellow miners, his old neighbors, simply as John Star's son. And Bob Star had talked to them, had roused them into hope with the wand of splendid words.

As new men, they rose to follow the glorious banner of those names.

And Bob Star had come at last to Giles Habibula, demanding: "Giles, can you open the door?"

The old man started. The yellow,

seamed moon of his face went ashen. The small, fishy eyes grew round with bewildered protest.

"Why, lad?" he rasped hoarsely, trembling. "In the name of precious life, why should I open the door?"

"Can you?" Bob insisted.

"Ah, 'tis the melancholy fate of genius ever to be in question." He shook his head, dolefully. "Yes, lad, I can open the door. I watched the working of the lock as they let us in, and I've been looking at the thing for precious hours, until I can see every part within the case.

Jay Kalam, with whom Bob Star had discussed the piece of reckless audacity he called a plan, said soberly: "Do it, Giles."

The old man shuddered, wheezing: "Ah, no! Not beneath the fearful, glittering eye of that mortal globe——"

"We'll try to distract it," Bob Star told him.

And he made a little sign to the gaunt, gray-faced miner, Hector Valdin, who sprang toward Kay Nymidee, leering, grasping for her. She screamed, ran stumbling toward Bob Star. Shouting, Bob Star leaped at his haggard ally. Others rushed to circle them. A noisy riot swept up and down the ramp.

Meanwhile, Giles Habibula crept trembling to the massive lock at the top of the ramp. But his thick fingers didn't tremble when they touched the great red case. A singular quick deftness came into them, an amazing sensitivity.

He reached through the bars——

Shouting, Jay Kalam was pushing his way toward the center of the milling throng. And gigantic Hal Samdu was fighting now, with such grim and silent earnestness as if he forgot it was make-believe.

Then Giles Habibula came lumbering down the ramp, gasping for Bob Star. His face was yellow-green, glistening with beads of sweat. Even his nose

seemed paler purple. He was breathless, panting.

"Lad!" he wheezed. "Lad, the door is unlocked! You may go through, if you are such a mortal fool——"

And Bob Star led the cheering mob up the ramp. As he reached the massive red grating, his clear voice called a ringing command. Magically, then, it was a mob no longer, but a terrible and desperate army.

HAL SAMDU and Hector Valdin helped him fling aside the unlocked grating. He led the rush upon the white sphere beyond, to pit bare human flesh against its metal might.

It was a mad thing; Jay Kalam had made him see that. These thousands behind him were weaponless, already once beaten. There was a formidable guard: the argent spheres; the green, bounding cones from whose pointed heads spurted the orange ray; the red giants with their golden weapons.

And if one of the Cometeers should be aboard, with its dread power of inducing paralysis and unconsciousness, the thing was sheer folly.

But Bob Star led his crush of silent, empty-handed men against the metal sphere. They lifted it, and surged with it toward the red wall of the corridor. It was hooting a raucous alarm; the white tentacles were fighting. They seized the bodies of men, to beat men down with living flails.

Others took the places of the fallen. Bob Star had made death itself a victory to the men behind him. It was a mad battle—but his magic words had tapped the terrible power of madness.

And a supernal thing strode among the prisoners as they marched from the hold, something greater than any of them, than all of them. It was that intangible, ineffable power that touched a few beasts in the wilderness of early Earth and created the unity that is man-

kind and the glory of a far-flung system.

That power was greater than the words that had waked it. It banished all fear, all consideration of self; for it made self the insignificant instrument of an overwhelming entity.

It was that something, transfiguring human flesh, that smashed the hooting sphere against the red metal wall again and again, until the faceted eyes were shattered and its surface was crushed in, until the deadly tentacles were still and the hooting ceased—and then rent it into parts, for weapons.

It was the same power that led the ragged horde down the corridor, to meet the fantastic terror of the alarmed guard: Another argent sphere, hooting hoarse commands; three of the tall green cones, bouncing upon distended bases, booming their threats, flashing orange-red rays from their narrow, pointed heads; and a full score of the red-armored, three-legged giants, with strange colors flashing from the stalked organs where their heads should have been, their slender tentacular limbs clutching golden weapons.

It was hopeless, Bob Star saw. It was useless, utter folly.

But the supernal power sweeping him would not be stopped. And he led the way to meet that alien band, shouting, flourishing one of the tentacles of the metal globe which had stiffened into a silver spear. A great eager voice rolled up behind him. And he knew that these transfigured men would fight, even to death.

That, for Bob Star, was the end of the battle.

He had flung his argent spear at one of the green, bounding cones. He saw it strike the oily, glistening skin, and sink deep. He plunged forward, to grasp it and strike again. But he saw the green neck flex, so that the narrow head pointed at him, saw the beginning of an orange flash.

Then a red and merciless spear of pain drove through the old, ragged scar on his forehead, and probed the depths of his tortured brain. Red agony exploded through his skull and faded slowly into darkness. Faintly, as his sick consciousness went out like a dying flame, he heard the thundering, triumphant shout: "Take the ship!"

XXVI.

BOB STAR woke once more from the same singular dream.

Again his body was the shining, weightless body of one of the Cometeers. And again he was pursuing the shining, supernal form of Stephen Orco, who fled with a woman—his mother, sometimes, and sometimes Kay Nymidee.

He had some unpictured weapon, and he sought with it to destroy Stephen Orco, to save the woman from unthinkable vampirism. And once more he was being crushed down by a great hammer of scarlet pain, and again the ancient fear was yelling: "You can't! You can't kill him!"

Awake, he still felt disturbingly weightless. He was floating in the air, he discovered, rather than lying down. And the lack of weight gave him an unpleasant giddiness.

Before he could see, his hand came up to his forehead. Upon the old scar was a little swollen patch, inflamed and painful to the touch—where the stunning organic ray had struck. The old pain still throbbed under it, keener, more intense, like a needle of flame stabbing intermittently through his brain.

He found, when he could see, that he was in a very curious place—no longer upon the disk ship. It was a shaft, or pit, perhaps fifty feet square and a hundred deep. Its walls, apparently, were of the same perdurable material as armored the planet, jewel-smooth, lustrous violet-blue.

He was simply floating, drifting, in it, away from any wall.

Gingerly touching the painful swelling upon his forehead, he twisted his head to peer about, awkwardly, and so discovered his old companions.

Ludicrously sprawled in the air, Giles Habibula was clinging to the bottom of the pit, where a circle of slender rods of red metal projected from the polished indigo wall. His deft, sensitive fingers were sliding the rods in and out, twisting them; the yellow globe of his head was cocked as if to listen.

Jay Kalam and Kay Nymidee were near him, equally weightless, busy with some unfamiliar instrument. From a rectangular case of red metal they were taking wires and coils and odd-looking parts of scarlet metal, and little round, black cells.

It took Bob Star a moment to locate Hal Samdu. Battered somewhat, covered with bloodstained bandages, the giant was at the opening of the square pit. He was clinging to the edge, peering out as if on guard. One great hand clutched a long rod of yellow metal—a weapon, Bob Star knew, that must have been taken from one of the lean, red-armored beings.

Beyond him, beyond the square mouth of the pit, yawned a dark, cavernous abyss. Far distant in it he could glimpse rugged walls of dark rock; and, equally distant, he saw part of a machine fantastically huge, faintly illuminated with a ghastly crimson light.

A curious sickness came upon Bob Star as he tried to move, as if every tissue of his body clamored for the certainty and the orientation of weight. He yearned for something to cling to, and floundered about in the air until his foot kicked the wall.

The action had surprising results. It sent him hurtling, head foremost, across the fifty feet to the opposite wall. Dismayed, he flung out his arms to fend for his head. The undue force of the

gesture sent him spinning back across the pit.

GILES HABIBULA reached away from the circle of rods, to catch Bob's ankle.

"Better cling to this bit of rail, lad," he advised, "or you'll be smashing out your wits. We're almost at the center of the mortal planet, and nearly free of gravity. One step could carry you a mile——"

"At the center of the planet?" Bob Star repeated, bewildered. "Tell me, Giles—what happened? How did we get here? How long have I been unconscious?"

The old man had returned to his business of twisting and sliding the scarlet rods, resting sensitive finger tips delicately here and there, as if to study faint vibrations.

"Ah, lad," he wheezed, abstractedly, "you've been out for a mortal time. The ray from that fearful creature struck your old wound; I feared it had killed you."

"The ship?" Bob Star asked, eagerly.

"Did we take the ship?"

"Ah, so, we took the ship."

He spun a series of rods, listening, and went on: "Thanks to the mad courage you had put into the prisoners, lad—they overwhelmed our guards like a wild sea. And thanks, too, to the unrewarded genius of a poor old soldier in the legion. Thanks, also, to the miner, Hector Valdin; he led them after you fell, lad—until he died."

The thin, absent voice had faded, and Bob Star asked: "You say we're at the center of the planet? Then how did we get here? And what became of the ship?"

"We were already in the cavernous space outside when we took the ship," said Giles Habibula. "The core of the planet is a hive of the mortal *aythrin*! They had brought us here to feed their evil lives."

He shuddered, but, oddly, his thick fingers, on the rods, didn't pause or tremble.

"When the ship was ours," his slow voice went on, "Jay and the lass took command. They disembarked us here an hour ago. Our comrades went on in the ship to seek some refuge in the caverns. Ever since, I've been toiling with this lock.

"Ah," he muttered, "'tis mortal difficult! The number of possible combinations—it would make your head spin, lad! To open it by trial and error would take from now until the sun grows cold. Ah, me! the *aythrin* are mortal clever——

"But the lass bade me open it, lad. She says the secret place of the *aythrin* is beyond, where they guard the precious power that we must have to kill Stephen Orco."

"I see," said Bob Star. He bit his lip. "I'm sorry, Giles, if my talk has bothered you——"

"Not so, lad," protested the old man. "Talk but oils the working of my precious genius."

His thick body bent; he groaned painfully.

"Ah, lad," he complained, "this lock is a mortal trial. Never was such a riddle built into cold metal, lad. And never was old Giles so unfit to draw out the answer. For old Giles Habibula is ill, lad—fearfully ill. The stark hand of death is close upon him!"

But his fingers didn't cease their labor.

Jay Kalam and Kay Nymidee were still busy over the intricate thing in the red metal case.

"What's that?" Bob Star inquired.

"'Tis some blessed contraption Jay tore out of the control room of the ship before we came off. From the wonderment on his face, I doubt that he knows himself what it is."

"Kay——"

BOB STAR had begun another question, when sudden, unendurable sickness seized him.

Here, near the planet's center, he had no weight. Directions had no meaning. His surroundings had begun to spin, dizzily. At one moment the indigo shaft was horizontal. The next, it was an inverted pit, and he was clinging precariously to the roof of a vertiginous abyss.

Giles Habibula, beside him, was doubled up again, his moon face greenish, sweat-beaded.

"Ah, Jay," his thin voice called, "I'm sick. 'Tis the illness the doctors warned me of. The wine upon the asteroid—ah, it was wondrous wine! And the food——"

His voice became a whine of agony.

"Farewell, comrades!" he gasped hoarsely. "Old Giles must leave you, now——"

"Not yet, Giles," interrupted Jay Kalam, urgently. "We all feel indisposed from being without weight. It is the same as the space sickness they used to have on the old rocket fliers, before the invention of the gravity cell. It is a disturbance of the semicircular canals; it affects the blood stream, internal organs, and brain.

"Some people are almost immune, as I am. Others never become adjusted to it. But you must open the lock, Giles, in spite of it! All we have done is useless unless we get through this door."

"I can't do it, Jay," moaned the old man. He was sweating, panting. "I'm too mortal ill! The torture of a dying body destroys my concentration. For life's sake, Jay——"

"You must, Giles. The only thing in the universe that can destroy Stephen Orco is beyond—somewhere beyond, where the *aythrin* guard it."

Giles Habibula sighed, and bent again to his task.

"Ah," he sobbed, "'tis a bitter lot——"

Kay Nymidee was still busy over the red metal case. Now Bob Star heard her utter a little cry of satisfaction. She held up a black, opalescent prism, and swiftly explained something to Jay Kalam. He nodded gravely, and rapidly they began to reassemble the mysterious device.

A dull, coughing explosion drew Bob Star's eyes toward the square mouth of the pit. He saw a puff of yellowish smoke issuing from the long tube of yellow metal in the hand of Hal Samdu.

Beyond, he saw a white globe approaching. It was sailing through the air, black belt spinning, black, faceted eyes glittering, white tentacles sprawling. In the midst of his consternation, Bob Star wondered briefly if it were all machine, or if it contained a living brain.

He heard its abrupt, hoarse hoot of alarm, close on the explosion.

Hal Samdu was furiously busy for a moment with the mechanism of the golden weapon. Then he hurled it spinning toward the silver globe, and came plunging down the shaft, to sprawl against the bottom of it, beside Bob Star.

"Aye, Jay," his deep voice rumbled apprehensively. "We are discovered! A horde of the monsters approached. I destroyed one—but the golden gun would not work again——"

His voice stilled to a terrific vibration that throbbed down the shaft. It was the clang of a huge gong, deep as the note of a hammered planet——

AND SUDDENLY, beyond the silver sphere, an alien horde was following into the pit: huge green cones, and red, grotesque giants in golden harness. Another globe brought up the rear.

They were swimming through the air.

Bob Star shivered to the uproar: the raucous howling of the spheres; the deep, incessant drumming of the cones; and, above, the all-pervading thunder

of the gong, like the sobbing in unison of all the bells ever cast, a soul-chilling alarm.

"Hasten, Giles," urged Jay Kalam.

"Ah, Jay," begged the old man, frantically, "have mercy!"

"You must," the commander told him soberly. "Or we shall die."

And, calmly, as if he could not hear that hideous knell of descending doom, Jay Kalam was still busy with the enigmatic mechanism in the long red case. Now he was fastening five wires to a binding post.

Kay Nymidee, eagerly aiding him, twisted one of the wires around Giles Habibula's fat arm. She made each of the others hold the end of a wire.

The gong still thundered its warning, deep as a vibration of the whole world about him. Bob Star watched the monstrous throng come down, until he could see the pattern of the tread on the black belts of the spheres, see the color-flushed, fantastic-stalked organs of the silent red giants.

From his tight lips rasped the hoarse demand: "What can we do?"

"I had hoped," he heard Jay Kalam's calm voice, gravely regretful, "that they would follow the ship, and give us time——"

Hal Samdu rumbled imploringly: "Hurry, Giles!"

"In life's name," protested Giles Habibula, "I'm too mortal ill——"

The foremost silver sphere was now close upon them. Its white tentacles whipped out toward Kay Nymidee. Bob Star set himself to leap at it in futile, bare-handed desperation.

"Wait!" breathed Jay Kalam.

He made some quick, final adjustment within the rectangular red case. A faint, momentary humming came from it, low at first, running up the scale of sound until it became ear-piercingly shrill, then inaudible.

It seemed to Bob Star that the light

abruptly changed, that a curious shadow had flickered down upon them. The nightmare throng was indefinitely distorted; it appeared somehow withdrawn, as if seen through an inexplicable veil.

Besides that, he sensed nothing. But the white sphere jerked back its grasping tentacles. The alien horde was abruptly silent, as if with consternation. Monstrous things rebounded from the walls, retreated.

Then, beside him, Giles Habibula sighed deeply.

"Ah, me," he gasped, with a vast relief. "It's done!"

Wearily, he wiped his pale-yellow face with the back of his hand.

Bob Star perceived that the entire bottom of the shaft had begun slipping away, like an inconceivably massive sliding door. There was a remote sound, like the rushing of a distant hurricane.

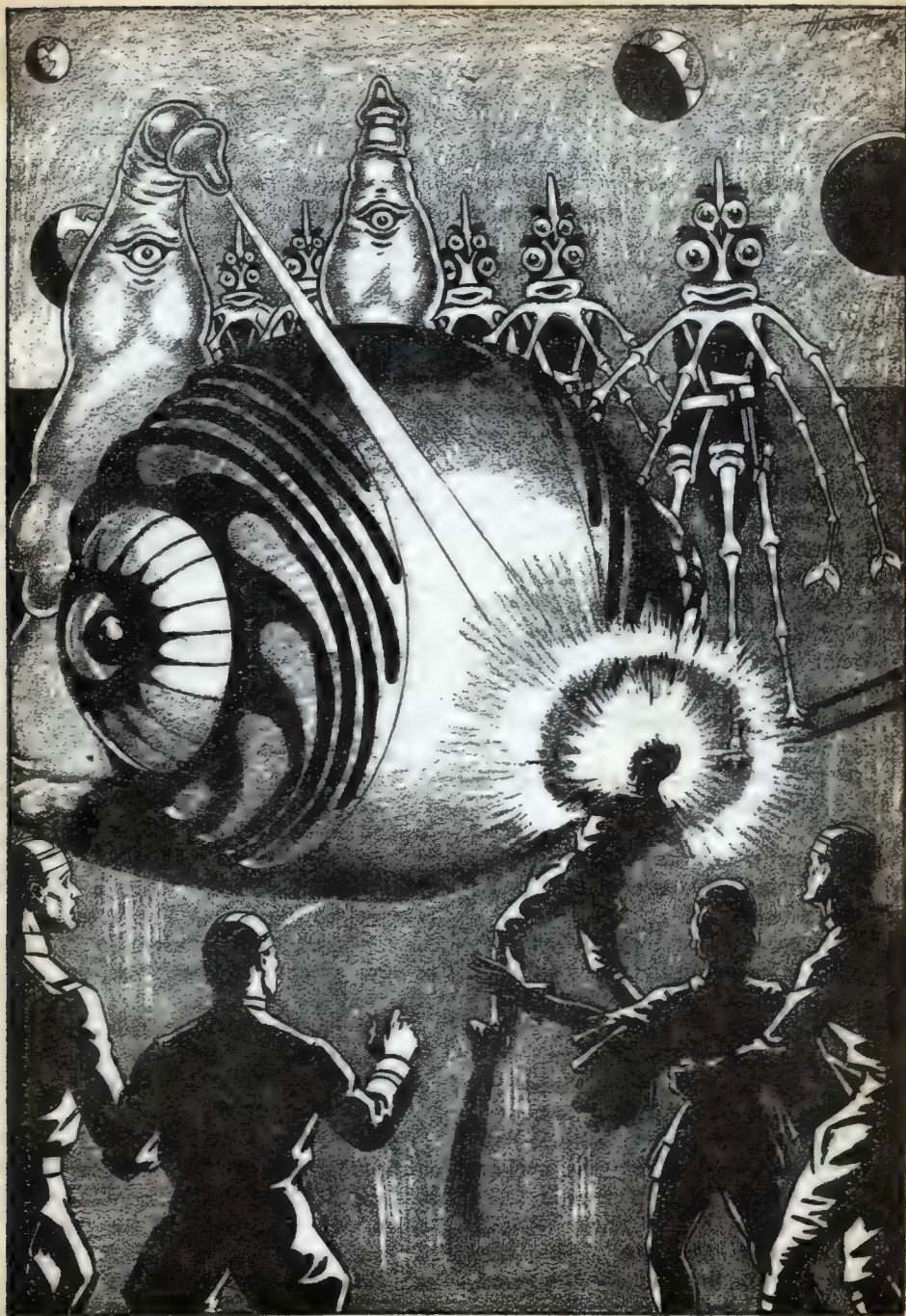
A dark slit appeared at one side of the shaft, and widened. And presently they were looking down a great, square well, walled with jewel-smooth indigo, into another world, where a small green sun was shining.

Jay Kalam was the first to speak; his voice was faint and deep with awe. "And this," he said, "is the hidden fortress of the Cometeers!"

XXVII.

BOB STAR was amazed at the extent of the space beyond that mighty door. When they had pushed themselves through the shaft, and Giles Habibula had touched something that closed the vast barrier behind them, they all paused to stare with bewildered astonishment.

Bob Star's sense of direction had changed again; it now seemed that this vast, dimly lighted void was above them. It must have been fifty miles in diameter, he thought—perhaps five hundred. It was roughly spherical. The walls of it appeared to be partly natural rock,



But it was too late—— From the dark pointed organ at the tip of the thing—which was like a head—flashed a thin, blinding ray——

dark and rugged. And they were partly tremendous flat surfaces of violet-blue.

There were machines looming mysteriously in that twilight vastness, huger than any upon the surface of the planet. They were the master machines, he supposed, that controlled the comet swarm. He sensed the power of terrific, unheard vibrations—too deep to be audible. He felt the wash of tremendous, well-leashed energies.

Those vague, shadowy mountains of mechanism were giants, he knew; they fed upon a captive sun, and drove clustered worlds through space like a ship.

A nightmarish sense of futility overcame him again. What could the puny five of them hope to accomplish against the masters of the comet? They were fools even to hope—

Then he was ill again. Suddenly he was clinging like a fly to the roof of this hollow world, and sick with the invincible fear that he was falling into the small green sun at the center of it. Then the green sun and the dim, Cyclopean machines began to spin over and under him, over and under, until he shut his eyes.

Faintly, he heard Kay Nymidee speaking, with awe and terror battling in her nervous voice against the elation of desperate daring.

"Kay says the secret of the *aythrin's* mortality is locked in the green sphere," he heard Jay Kalam interpreting. "Two of the Cometeers, she says, are always stationed outside of it, on guard.

"Even they cannot enter the sphere itself, for the metal of it is impregnated with forces that form a barrier to their nonmaterial bodies. Only the masters of the comet are able to enter it.

"Kay and her father studied it with their projector, she says. But they were never able to penetrate the green. Kay doesn't know how to enter, or what is within."

Nauseated, trembling, Bob Star forced his eyes open. He looked at the

pale, tense slimness of Kay Nymidee, at the others; he dared not look again, into that giddy, spinning void. Jay Kalam was gravely alert. Hal Samdu looked grimly belligerent. Giles Habibula was still greenishly ill.

"We must lose no time," Jay Kalam said decisively. "The slaves are bewildered for the moment. But they saw the door open. They will report what happened. And the *aythrin* won't be so easy to confuse.

"We must reach the green globe."

Bob Star stole an apprehensive glance at it—a small, dim-green sun, swung alone in that giddy void.

"How can we get there?" he whispered. "It's miles away—and floating free—"

"Not floating," Jay Kalam corrected him, gravely. "It must be suspended in etheric force fields. But still," he admitted, "there's nothing we can climb."

"Then," asked Bob Star, "how—"

The commander said quietly: "We must jump."

Bob Star was startled.

"Jump?"

"Certainly. There is no gravitation to stop us. If we don't miss the globe, and go sailing on beyond—"

Instinctively, Bob Star's hands clutched at the railing beside the great door. Stark horror lurked in the idea of a plunging fall through that directionless void.

"Can you go on, now, Giles?" asked Jay Kalam.

"Ah, so," he gasped. "If I must!"

JAY KALAM made them all crouch in a little circle upon the jewel-hard surface of the mighty door, holding hands. He had fastened the red, rectangular metal case to his belt; they all still clung to the wires fastened to it.

"When I give the word," he said, "we shall all leap toward the green sphere."

To Bob Star it began to spin again, over and under him. It took all his will

to keep his eyes upon it. Dimly, he heard the commander counting. He heard the quiet, "Now!" He leaped, with all his strength, into that spinning void.

For a moment he was too ill to be aware of anything. Then he knew that they were all clinging together, a little huddle of flying figures. They were helpless, pitiful, somehow ludicrous.

They were plunging through the confused vastness of a hollow world. The green sun seemed a very tiny and distant goal. And they were quite helpless to stop or turn.

"I'm afraid," said Jay Kalam, "that we're going to one side."

It was very strange, to Bob Star, to hear that voice, as cool and grave and perfectly modulated as always. A frightened whisper, a choking gasp, a scream, would have been in keeping with their nightmare flight. But those restrained, collected tones held grotesque incongruity.

The small green sun was whirling over and under them again. All meaning and direction had vanished from the vastness of that dim, silently thunderous cavern world. Bob Star's sickness returned, made intolerable by the lack of anything substantial to cling to.

He compressed his lips in silent agony.

"The damned *aythrin*—those on guard?" he heard Hal Samdu's booming question. "Won't they see us?"

"Not so long as we hold these wires," Jay Kalam informed him. "It is possible, however, that they may detect us with other senses than sight."

Fighting his sickness, Bob Star looked along the glistening red wire that he grasped, to the instrument at Jay Kalam's belt.

"We aren't"—he gasped—"invisible?"

Sitting in empty space as if he rested in a chair, the commander nodded his dark head soberly.

"Kay and I tore the invisibility mechanism out of the ship we took," he said.

"In my haste to remove it I got it out of adjustment. We had some difficulty in discovering the principle of it so that we could repair it—our success, I should say, is due to Kay.

"It seems," he explained, "to create an etheric field about everything electrically connected with it, forming a kind of etheric pocket about which rays of light are bent uninterrupted. That effect, alone," he added, "would leave us blind, for want of light. Some radiation, probably far within the ultra-violet, penetrates the field and its revibrated as visible light."

His thin lips pursed.

"There," he said slowly, "is one danger. If the Cometeers should be sensitive——"

Recurrent illness swept Bob Star's attention away.

During that fall—for to Bob Star it was a fall, through the vertiginous depths of some ultimate hell—time lost its meaning. He settled into a passive, agonized endurance.

By turns, he opened and closed his eyes. He watched the dizzy spinning of that remote green sun, amid the monstrous mechanism that filled this hollow world with the terrific, unheard vibration of power beyond imagination. He closed his eyes, and was bathed in that silent, eternal thunder. And his illness did not cease.

With one hand he clung to Giles Habibula, who was still sick, green-faced, groaning.

And he gripped the hand of Kay Nymidee. She was silent, pale, tense. But sometimes, when he could see her face, she smiled a little.

TIME had seemed suspended. But at last Bob Star realized that the pallid, weird-green sphere was near, and somewhat to one side.

He heard Jay Kalam say: "Yes, we're about to miss it."

"Ah, so," sighed Giles Habibula.

"And it's my fault, Jay! I was too mortal slow when we leaped. I dragged you all aside——"

Bob Star's sickness was increased by the bitterness of defeat.

"There's no way," he muttered, "to turn!"

He was amazed to hear Jay Kalām say: "There is a way—at the cost of one of us."

He whispered, "How?"

"One of us," said the commander, "must turn loose and kick away, so that the reaction will push us toward the globe. We are like a ship in space—and one of us must be the rocket."

"That would work!" Bob Star exclaimed eagerly. Then dismay choked his voice to a whisper. "But he would have to let go the wire. He would be visible again. And the *aythrin* would destroy him!"

"Aye, Jay," Hal Samdu was rumbling, "just tell me what to do."

"No," protested Bob Star, hoarsely. "I'll be the one——"

"Bob," said the commander, quietly, "you must stay with us."

He gave Hal Samdu brief directions. The giant crouched against the huddle of their drifting bodies, then kicked powerfully away. His sprawling body spun off through emptiness. It seemed to flicker, oddly, as it passed the veil of invisibility.

It grew small, hurtling away into the silent, thundering twilight.

Giles Habibula was abruptly sobbing, noisily. And Bob Star felt the salt sting of tears in his eyes, a bitter ache in his throat. Big, simple Hal Samdu had been his guard since he was a child.

Then he saw the pale, uncannily green of the sphere again. It was close, rushing upon them. He whispered: "We're almost——"

Kay Nymidee's hand clapped over his mouth. She was white and rigid with dread.

Then he saw the shining thing float-

ing watchfully near the globe. It was like a magnet metamorphosed into living fire, with red star and violet star within their moons of mist, for poles; with the swirling spindle of silver-green atoms like the field between them; with the massive emerald ring like a coil about the field.

It was more than alive. It was the dwelling of supernal power.

They passed close to it, and it abruptly paused in its slow flight about the green sphere. Bob Star's heart stopped. His skin prickled to the chill of sudden sweat. His muscles tensed involuntarily; his breath went out with a gasp.

For an instant the thing was without motion. The pulsation of the bright stars ceased. And the misty spindle seemed frozen into a pillar of greenish ice. Then burning life returned.

The thing darted away in the direction that Hal Samdu had gone.

Kay Nymidee's hand uncovered Bob Star's mouth.

"It was Hal that it saw," he whispered.

Jay Kalām nodded and said: "But it will soon be looking for us!"

A moment later they thudded against the cold, hard metal of the pallidly glowing sphere. They crouched upon the green surface, held to it by a slight attraction.

It was like a little world, Bob Star thought; perhaps it was half a mile in diameter.

Kay Nymidee spoke eagerly to Jay Kalām.

"What we seek is within," he interpreted deliberately. "This is a kind of safe."

"Mortal me!" gasped Giles Habibula in despair. "And what a safe!"

XXVIII.

EVERY SAFE, Jay Kalām reasoned, must have a door.

They searched, shuffling very care-

fully across the green, glowing surface, walking by the aid of its slight gravitation. They came at last to a square, twenty-foot depression, surrounded by a low metal flange.

Giles Habibula scrambled down into the pit and examined a triple circle of projecting green metal rods.

"Ah, me!" he moaned with dismay, "if that last lock was difficult, this one is mortal impossible! The masters of the comet couldn't open it themselves, with all their precious science, if ever they lost the combination.

"Ah, so, but they are fearful clever, the lords of the comet!" he wheezed. "What a lock! You could try possible combinations at random till the blessed universe runs down, and the odds are a million to one the door would still be closed."

His thick fingers, so uncannily sensitive, so amazingly deft, were already swiftly busy, sliding the rods in and out, twirling them. He was listening intently, although Bob Star could hear no faintest sound.

The others clung to the flange above him: Bob Star, at intervals, was still acutely ill. And momentarily he expected to see the dread, shining pillar of one of the Cometeers materialize beside him, perhaps to speak with the triumphant voice of Stephen Orco.

Urgently, Jay Kalam inquired at last: "Giles, can you do it?"

The old man looked up, to wipe the sweat from his yellow face with the back of his hand.

"'Tis mortal difficult." He shook his bald, round head. "'Tis a fearful test of my precious genius, Jay. Never was such a lock built in the system, or on Yarkand."

Wearily, he bent again.

"Opening locks," he muttered, "is largely a matter of point of view. To any of you, a lock is something to prevent the opening of a door—and it does prevent it. But my genius sees a lock

as a means of opening the door—and it is."

He groaned, and spat.

"Or at least," he amended, "it should be. But old Giles never met such a lock as this!"

"And never," Jay Kalam said, "was a more valuable treasure locked up. So long as their secret is safe, the Cometeers are immortal, invincible——"

Kay Nymidee had seized his arm, to speak urgently in swift, strained tones.

"Hasten, Giles," he pleaded. "Kay says that they will surely find us soon. Our invisibility, you know, is a trick of their own. It can't baffle them long."

The old man looked up again, his small red eyes round with anger.

"For life's sake," he burst out, "have you no patience? Here is Giles Habibula, a feeble old soldier, faint with mortal illness, doomed to die in a hideous, alien world! Ah, so, a dying man, taxing his sacred genius to the last ounce to solve a mortal riddle that would baffle all the scientists, mathematicians and doddering philosophers in the blessed system for the next ten thousand years!

"In the name of precious life, can't you let him work in peace without screaming in his blessed ear——"

"Forgive me, Giles," said the commander, hastily. "I'm sorry. Go on."

The old man shook his head, muttering, and bent again to the triple circle of green rods.

Bob Star, ill, was aware of the little hammer of red pain that had throbbed against his brain, unceasingly, for nine long years. It seemed sharper now, changed, since the organic orange ray had burned through his old scar. And the old fear was stalking down upon him like a hideous specter.

Through the mounting tension of ultimate catastrophe it shrieked the fearful warning: "You can't kill Stephen Orco!"

"Well!" came explosively from the pit. "'Tis done!"

A faint vibration whispered through the green sphere. The floor of the pit slid deliberately aside. Giles Habibula clung to the flange at the edge.

"Ah, me!" he whispered. "'Twas a desperate trial."

A dark slit appeared and widened, until they looked into a deep, square well, whose walls were shining green.

"Come," said Jay Kalam, eagerly. "Gravity will aid us."

THEY PUSHED themselves into the square pit. They fell hundreds of feet, and struck another metal door, which was studded with three circles of projecting rods.

"Another mortal lock," muttered Giles Habibula. "Ah, well," he sighed, "'twill be easier, now that I have discovered the principle."

He touched something, and hidden mechanism whispered again. The green door closed ponderously behind them. He bent to the second lock.

"Never," he wheezed abstractedly, "was my genius so fearfully tried. And never was it fired by such dreadful emergency. Ah, me! this day will mark the death of Giles Habibula! This mortal safe may well be his tomb."

The green metal whispered again, and the Cyclopean mass of the inner door slipped aside. They followed the square passage into a small, square room at the center of the green, colossal sphere. It was flooded with the pale, strange radiation of the walls, and the passage was the only entrance.

The little chamber was empty, save for a massive, rectangular box of the scarlet metal, three feet long, fixed to one wall. The sides of it bore singular, hieroglyphic designs in silver and black. Upon the top of it was another triple circle of projecting rods.

Moaning under his breath, Giles Habibula applied himself.

As the inner door, also, closed behind him, Bob Star clung to the wall, regarding the box with a certain wondering doubt. Already he was a little disappointed. His vague expectations had included something more impressive than this red chest, so small that a man might have carried it.

"It's no use," he whispered. "No use!"

For what instrumentality within the box could defeat the tremendous power, the mysterious, hyperthropic science, whose awe-compelling evidence had surrounded them so long?

He went cold and rigid with alarm when another vibration whispered through the cold, green metal.

Kay Nymidee began to tremble. From her white, drawn lips came a strained, unconscious little cry. It was like an unwilling scream, forced from some helpless, tortured animal.

"That was the outer door," said Jay Kalam. "They are coming!"

Even his usually controlled voice had fallen to a husky whisper.

"Ah!" gasped Giles Habibula. "Here! 'Tis open!"

Bob Star sprang apprehensively to his side, to help throw back the lid of the scarlet box. Anxiously, he peered within.

He hardly knew what he had expected to find. Something, of course, capable of destroying the luminous, half-material forms of the uncanny *aythrin*—of Stephen Orco. Perhaps some intricate mechanical weapon.

But his mouth fell open upon a voiceless cry of dismay.

The box was empty!

XXIX.

FOR A MOMENT Bob Star was numb and faint with consternation. Intolerable illness came back. The green walls of the small, square room spun

about him. Quivering, cold with sweat, he clung to the edge of the red box.

"Jay, 'tis all in vain," he heard Giles Habibula's weary murmur. "There's nothing in the mortal box."

The old man's breath went out with a melancholy sigh.

"Mortal me!" he wheezed. "Never did fate perpetrate such a fearful jest!"

Sorrowfully, he shook the yellow globe of his head.

"Nor did men ever struggle so, for a reward so miserable! We roved the frozen night of Neptune's polar desert to find a ship, and fought a mad cannibal for it. We voyaged the perilous wastes of space until the shining monster met us.

"We dwelt amid the haunting horror of the asteroid, and entered the terror of the comet upon it. We plunged close to death in the purple sun. We traversed the fearful perils of the comet, to reach this alien planet.

"We were captured, and fought the hideous spawn of a dozen frightful worlds for our blessed liberty. We came fifteen thousand miles, into the core of an armored planet. We broke locks that were fearful difficult, and made our bodies into a living ship of space. Alas, poor Hal, who perished for us!

"We passed the menace of the mortal *aythrin*, with Jay's machine of invisibility. And now old Giles Habibula has exhausted his precious well of genius, to break into the strongest safe in all the universe.

"But 'tis all in vain. The mortal thing is empty! Empty——"

He choked upon a sob. Tears trickled down his purple nose. His voice was lost in weeping.

Recovering a little from his illness, Bob Star explored the interior of the red box with groping hands. Could the thing they sought be invisible?

He felt nothing but bare metal.

He looked up, bleakly, at Jay Kalam and Kay Nymidee.

Ghostly white, the girl was staring down into the empty box. Her bloodless face had gone flaccid with despair. Her eyes were wide, dull with the death of hope. Her body was limp, nerveless. Bob thought she would have fallen, had there been gravitation to cause it.

Jay Kalam, beside her, was rigid, silent. His lean face was ashen. He retained his expression of formal, grave composure. But it was leaden; something had died beneath it. His eyes were blank windows into vacant space; they had no light in them.

His lean, slender fingers were twisted together with a repressed and silent agony.

The girl's dull eyes crossed Bob Star's. But no warmth, no recognition, came into them.

She began talking as if to herself, in a dead, husky whisper. Jay Kalam interpreted her words; but it seemed to Bob Star that he did so like an automatic machine, without himself comprehending their meaning.

"I am the last of my people. For twelve generations we have dwelt amid the peril and the horror of the comet. We have lived, when death would have been welcome, for one thing—to destroy the *aythrin* before they could destroy mankind. My father lived and died for that, and all my people did.

"Now I thought we had a chance. But we have lost——"

His voice grew slow, and faded away, as if he had been a speaking machine, and the machine had run down.

Giles Habibula was still slumped over the empty box. He was weeping noisily, blowing his nose. His fat fingers were restlessly exploring the smooth red metal, in aimless search.

Straightening convulsively, Bob Star whispered: "There's nothing—nothing else?"

Jay Kalam shook his head. His teeth

had cut into his thin lip, and his lean chin was bright with blood. There was terrible contrast in the grave restraint of his face, and the horror of that scarlet stain.

"Nothing, Bob," he said. "We had the one slender chance. It failed——"

He licked his lip, and seemed dully surprised at the taste of blood.

"We can only wait—for them——"

DAZED, hopeless, Bob Star stared vacantly into the empty box, or at the bare, green walls. They were doomed. The resistless truth coiled about him like a constricting serpent. The old pain throbbed, keener, more intense, within his brain. The ancient fear mounted in him; it would never die.

Sickness came back. He crumpled down beside moaning Giles Habibula, a heap of trembling, agonized despair.

He heard the remote whisper of the inner door. It was opening. The dry and voiceless gasp of Kay Nymidee drew up his eyes. He saw the Cometeers.

The two creatures were near them in the small green room. They were floating side by side. They were two ten-foot pillars formed of swirling, luminous, silver-green atoms. Each pillar rested upon a pulsating star of hot red fire, wrapped in a misty scarlet moon. Each was crowned with a star of frigid violet, beating like a heart of fire in the center of a violet moon. And each was ringed with a belt of massive, glowing emerald.

And, like a magnetic force, each of them radiated pure, tangible horror.

Out of the nearer came a low chuckle, of easy, indifferent triumph. It was the careless laugh of a reckless, immortal god.

Listening wearily from the apathy of utter despair, Bob Star heard the familiar, ringing baritone of Stephen Orco: "Greetings, Bob. Allow me to present my colleague, who is the nominal master of the comet."

The violet star moved as if it made a mocking bow.

With a certain dim, lethargic interest, Bob Star stared at the shining lord of the comet. It, he supposed, was responsible for the monstrous joke of the empty box. Were the Cometeers, he wondered, indeed completely invulnerable? Had this tremendous, guarded vault been but a colossal hoax, maintained by the luminous being for the sake of prestige?

"Your remarkable enterprise," said the easy voice of Stephen Orco, "has alarmed my colleague, who is going to take steps for its immediate termination. I regret your untimely passing, Bob, but your amazing indiscretions have made it impracticable for me to preserve your life any farther."

If the voice had gibbered or whispered or shrieked, Bob Star thought, the horror of it would have been less. For there was a dreadful discrepancy between the terrible, mind-searing wonder before his eyes, and that careless tone of laughing levity.

"Before you die, Bob," it said, "you would like to hear of your parents? They are quite near, you know—so near that your companion, Hal Samdu, was brought, upon his capture, to their prison ship. That is how I came to be aware of your extraordinary activities.

"Your mother, you will doubtless be relieved to know, is yet uninjured. But she has been displaying a foolish and useless reluctance to enter any discussion with me of the principles of AKKA—a reluctance which I have been devising means to overcome.

"Your mother will not live long, Bob, and I had planned for you and your companions to be present at the end. For she has asked for you, Bob. And she seems to hold affection for these men who used to be her guards. But the impatience of my colleague puts that out of the question."

There was a little pause, and Bob Star observed an anxious, restless movement on the part of the master of the comet.

"It is a pleasure," resumed the light, gay voice, from the nearer thing of frozen fire, "to be present at a crisis in universal history. And to judge from the apprehensions of my colleague, as we entered, this is indeed a crisis. His concern is rather astonishing.

"And it pleases me particularly, Bob, to be the instrument chosen to write the doom of mankind. I can't say why I should so rejoice in the doom of humanity.

"But farewell, Bob——"

The farther being had moved again, impatiently. And Bob Star felt a prickling over his skin; a greenish mist obscured his sight——

This, he knew, was the ultimate moment. The finish—for him—for humanity—for Kay Nymidee——

The last agonized moment of consciousness dragged into bitter eternity and——

DIMLY, remote in the rushing that filled his ears, he heard Jay Kalam's strained and husky voice.

"Wait, Orco!" he gasped. "Wait, and I can tell you why you feel yourself an alien—why you hate mankind!"

Bob Star was aware of reprieve. The tingling numbness receded from his limbs; he could see again. The rushing faded from his ears. He heard the mocking challenge of Stephen Orco's voice: "Well, Commander Kalam?"

Jay Kalam met the challenge, gravely.

"Stephen Orco," he said, "we first tried to enter the comet upon a small geodesic cruiser. A shining monster came aboard; it wrecked our generators and killed a man, Mark Lardo."

"I am aware of the incident—none better," said the voice, impatiently.

Listening, Bob Star wondered vaguely

at the commander's purpose. He was fighting for time, obviously. But what, in this ultimate extremity of defeat, was the value of time? Then his wonder was lost, in his consuming interest in Jay Kalam's revelation.

"We landed the wreck upon an uncharted transplutonian asteroid. It had been inhabited. Its people had been destroyed by the Cometeers. But there was a mystery left upon it. The master of the asteroid had been a scientist and an artist. Every feature of the little world proclaimed his extraordinary genius—and his amazing wealth. Why should such a man hide himself in a private world, beyond the system?"

"The answer," inquired Stephen Orco, "is of interest to me?"

"It explains your difference from common men," said Jay Kalam. "Your unusual gifts, your desire for superiority, your hostility to mankind."

"Go on," said the voice. "But be quick!"

And it seemed to Bob Star that the nearer shining thing made a restraining gesture toward the other.

"One remarkable feature of the riddle," the quiet-voiced commander went on, "was a very complete biological laboratory, cleverly hidden beneath the dwelling.

"Another was the emblem of the mysterious master of the asteroid—the *crux ansata* and crossed bones, in red, upon a black background. You may recall that the same emblem—the symbol of life above the symbol of death—is associated with the mystery of your own origin, Stephen Orco?"

The shining being came a little nearer; the restless whirling of its green-and-argent pillar seemed to pause; Bob Star sensed its compelling interest.

"The asteroid was dragged into the comet with us——"

"Thank you," said the voice. "My associates have been perplexed as to your mode of entrance. But go on!"

"The asteroid was flung into the purple sun," Jay Kalam continued. "But not before I had solved its riddle. Its master," he explained, "kept a diary in a secret shorthand, which I was able to read. The solution," he added, "I have kept to myself until now, because of its unpleasant aspects."

"Let's have it," demanded the voice. "My colleague will not submit to much longer restraint."

"The master of the asteroid," the commander went on, still deliberately grave—still, Bob Star realized, fighting, inexplicably, for time—"was a man named Eldo Arrynu. A native of Earth, he was educated there and on Mars in biological science.

"ELDO ARRYNU was peculiarly brilliant, in artistic as well as scientific directions. His early career was distinguished—until he was sentenced in disgrace to a Martian prison, for conducting illegal experiments.

"Within a year after his imprisonment, he was pardoned, in reward for a brilliant emergency operation, that saved the warden's life. He vanished. And the legion was never able to find him again—although we had evidence enough of his diabolical activities.

"What he did, of course, was to take refuge upon this unknown asteroid. In prison, apparently, he had formed connections with a powerful ring of space pirates and interplanetary smugglers. He soon became the leader of it, evidently, and turned its criminal activities in a new and terrible direction.

"For, upon the asteroid, he became the ruler of the most insidious traffic that has ever disgraced the system, one which the legion has fought in vain to suppress. It is that traffic whose accursed reward transformed a barren rock into a hidden paradise, that was an artist's dream of beauty made real and——"

"Be brief," warned the voice of Stephen Orco. "Or die!"

"The illegal experiments of Eldo Arrynu," Jay Kalam continued, still unhurried, "had been in the synthesis of life—repeated horrors long ago forced the council to outlaw such efforts.

"And upon the asteroid, he carried his forbidden work to a triumphant completion. The traffic that brought him such enormous wealth was the production and sale of androids."

For a moment the nearer shining thing seemed frozen. Red star and violet star ceased their regular beat. And the misty spindle between them was congealed into a pillar of green-white crystal. Then it broke into quivering motion, and a startled word came out of it: "Androids!"

"Eldo Arrynu," amplified Jay Kalam, "had come upon the secret of synthetic life. He generated artificial cells, and propagated them in nutrient media, controlling development by radiological and biochemical means.

"He was an artist, as well as a scientist. The genius of creation was a supernal flame in him. He worked in living, synthetic flesh. He achieved miracles—diabolical miracles——"

The commander's lean face had grown dark and hard, as if with the pain of a festering memory.

"It is a sorry commentary upon human civilization," he said grimly, "that a wealthy man should give half his fortune for a hundred pounds of synthetic protoplasm. But many did—enough to give Eldo Arrynu the wealth he desired."

His hard jaws clenched suddenly, until they went pale.

"Nor can I blame them, altogether," he whispered. His dark eyes seemed to stare into a terrible window of the past. "For there was one arrested by the legion for her owner's murder. She was the spirit of beauty made real; she

was a true artist's dream of grace——"

His lean throat worked to a convulsive swallow.

"It was my duty to destroy her. But——almost——"

His dark eyes looked suddenly, gratefully, at Bob Star.

"But for the memory of your mother, Bob, I might have brought disgrace upon the legion——"

He collected himself, and brought his eyes back to the restless, shining forms.

"The criminal activities of the ring did not stop with the mere sale of the androids," he said. "For in the flawless, enthralling perfection of their bodies, these beings frequently embodied the most demoniacal criminal instincts. The luckless purchaser often found that the price included the remainder of his fortune, and sometimes his life.

"Eldo Arrynu wrote black pages into the records of the legion——"

"But," the commander went on, "if he failed to ingraft in his creations any moral restraint, Eldo Arrynu seems to have had no difficulty in endowing them with extraordinary cunning—or even, sometimes, with an exceptional intelligence."

JAY KALAM paused momentarily, and said, in a lower, more casual tone: "You must already have guessed what I'm going to tell you, Stephen Orco. You aren't a man. You are a synthetic monster from the laboratory of Eldo Arrynu."

The frozen violet star dipped as if it bowed. The light mockery of the voice spoke out of the misty pillar: "Thank you, commander."

"Your case," Jay Kalam added, still deliberately calm, "is fully discussed in the diary. Eldo Arrynu took exceptional pains with your creation. His sublime artistic genius had got the better of his practical instincts. He designed you as a perfect being, a true superman.

"Soon, however, after you emerged from his vats and incubators, he perceived the fatal flaw in you—the cold fiend, sleeping! He saw that his supreme effort had fallen short of humanity in the vital direction.

"The diary records a curious struggle. One entry praises your perfections, your supernal powers; it glows with his love for you—for he loved you, with the love of an artist for his masterpiece, and the love of a man for his son.

"The next is a gloomy record of doubts and misgivings, filled with evidences of the fiendish coldness that he could never eradicate. It ends with the determination to destroy you.

"Unfortunately, however, Eldo Arrynu never brought himself to the task. His love forced him into a regrettable compromise. He sealed you into a magnelithium cylinder, with everything necessary to preserve your life. And he cast you adrift in space, far from the asteroid.

"By concealing his identity from you," said the commander, solemnly, "he hoped to escape the consequences of his folly. But even so, you destroyed your maker, Stephen Orco, when you loosed the Cometeers upon the system!

"The mental torture of your long, helpless confinement in the cylinder must have been an adverse influence in the formation of your character. I suspect that much of your desire for power and superiority is by way of compensation for that imprisonment.

"But you were never human——"

"I am grateful, commander," broke in the mocking levity of Stephen Orco's voice, "for this revelation. But I fail to perceive any advantage to you in having made it. Certainly it makes me no more merciful to you or to mankind to know that I am not a man."

The farther shining form made an imperative forward motion.

The voice of Stephen Orco said, hastily: "Now you may prepare to die."

XXX.

LISTENING to the commander's quiet, solemn narrative, Bob Star had been staring fixedly at the luminous shape that held the mind and the voice of Stephen Orco: the pillar of spinning greenish mist, emerald-ringed, between the red throbbing star and the violet.

His breast was racked with the conflict of strange emotions. So Stephen Orco was no man, had never been! That explained part of the old fear, the terrible, ancient hatred that had so twisted his life. It was no man that had seared his brain with the flaming ray of torture, on that fearful night at the academy—it was an alien *thing*!

With that knowledge, the bright pulse of pain behind the old scar seemed to waver in its beat for the first time in nine years. And his haunting fear seemed to shrink.

He was still crouching beside the empty red box. And old Giles Habibula was still bent over it, beside him, still weeping noisily, and frequently blowing his nose.

"Now you may prepare to die," he heard the swift, final words of Stephen Orco. "My colleague seems peculiarly apprehensive of your presence in the chamber of generation——"

The voice still spoke when Bob Star felt the slight, unobtrusive pressure of the old man's arm against his side. And the thing was pressed into his hand from behind.

The clear, instant light of revelation burst upon him; he knew why the commander had fought, with his deliberate disclosures, for vital time.

He stole a quick glance at the object Giles Habibula had slipped into his hand. It was a black cube, two inches on an edge. Projecting from one face was a little red knob. Its surface had the soapy slickness of a polished gem. It felt cold. It was oddly heavy in this

weightless spot, but more solid, he thought, than a similar bulk of lead.

He tried to conceal his abrupt, quivering tension. In the first instant, he knew that this was the weapon they had sought—and that he himself must use it, very quickly! Before those twin, flaming specters, he could not pass it to another.

And this was his chance! He recognized it, tremblingly. This was the moment he had yearned for through nine dreadful years—the opportunity to mend the broken something in him, to save his very sanity.

But the old scarlet pain shattered against him like an avalanche. The ancient fear shrieked: "You can't!"

And his arm turned to ice.

Then—it all happened in fractional seconds, while Stephen Orco's voice spoke a single sentence—he heard an eager little cry. And the bright image of Kay Nymidee came into the turmoil of his mind. The oval face smiled at him. The warmth of golden eyes thawed his fear.

Faint, shuddering, Bob Star twisted desperately at the scarlet knob.

A pale, ghostly streamer of silvery radiance swept from the opposite face of the ebon cube.

With a sharp, violent gesture that broke through the web of fear, he brought the cube up, so that the white beam swept toward Stephen Orco.

OUT OF THE AIR came the beginning of a low, apprehensive cry. It changed to a terrible scream. It died in a bubbling of pure, ultimate agony.

Bob Star's glance followed the wisp of silver light. The two luminous beings, he saw, were already dissolving into ghostly swirls of scintillant atoms. They dissipated, vanished.

Stephen Orco and the lord of the comet were dead.

The green walls rushed away from Bob Star and he was lost in a dark void

of terrible stillness. Time was stayed. His mind was frozen, and through it, like the reverberations of a colossal gong, quivered the fatal words: "Stephen Orco is dead. Stephen Orco is dead."

In that strange cessation of life and time, the fact was at first paradoxically appalling. It shattered the orientation, the very meaning of his existence. Each repetition of those momentous words was a stunning blow that drove him deeper into the dark chaos of that static abyss.

Timeless eternities endured before that darkness and confusion was broken by the first glow of incredulous joy. Slowly, then, his mind was buoyed up with an ultimate satisfaction; it was lifted on the supernal wings of a deep content, and borne at last back toward awareness of the green-walled chamber.

His old fear, the sure realization had come to him, had died with Stephen Orco. He knew suddenly that he would never be afraid again. That monstrous thing, born in his brain as it lay helpless under the dread torture of the omega ray, was now forever banished. A singular elation had surged into him, to replace it, a secure and deathless confidence.

And he perceived abruptly that the pitiless throb of pain behind his old scar had ceased. Gratefully, he welcomed the deep, vast relaxation that came to ease the old strain. He knew suddenly that for nine years he had not truly rested, and that now he could.

It was the magic hand of a supernal psychic victory that had healed the old mental wound—although Jay Kalam afterward suggested that on the physical side the orange-colored organic ray from the green cone must have had some accidental therapeutic influence toward counteracting the sinister effects of the omega ray.

When awareness of the room came back he had dropped the black cube.

He pushed himself across to Kay Nymidee, and grasped her hands. They had been cold and rigid, but warmth was flowing back into them. Her face was suddenly flushed with joy, and her smile washed the shadows from it for the first time since Bob Star had known her.

"You did it, Kay," he whispered. "You did it!"

She laughed, with a low, glad sound. Then she was in his arms, sobbing, almost hysterical.

CURIOSLY, Jay Kalam picked up the little cube which had become covered with a thick, gleaming mass of white frost crystals. He brushed away the frost and turned the red knob again, but no silver ray responded.

"It seems to be dead," he said. "Exhausted."

"I remember," Bob Star told him, "that it felt oddly light before I dropped it. And it was getting very cold. Perhaps I turned the knob more than necessary."

The commander nodded.

"I suspect," he said, "that you released a great deal of energy in some form——"

His grave tones broke off; his dark eyes flashed down at the cube; in a hushed, tense voice he asked: "Did you notice? They were both stricken before you lifted the ray!"

His lean finger scraped the stubble on his jaw.

"A very little of it was enough to destroy them. I wonder——"

He closed his dark eyes, and said deliberately: "The *aythrin* are complex etheric vortexes, constructs of vibration, fixed energy fields. Stephen Orco told us that. And they look somehow like magnetic fields made visible.

"Ordinarily they are stable, as the vibratory forces of an ordinary atom are stable—eternal. But this cube, I suppose, must have released some key

vibration that destroyed their stability. It simply unlocked their own stored energy, to annihilate them, as atoms are disrupted by their interfering fields in our power tubes.

"That, at least, is a suggestion——"

"Jay?" interrupted the anxious whine of Giles Habibula, who had ceased his noisy weeping. "The mortal shining creature—it is dead?"

"I'm certain," Jay Kalam told him, "that Stephen Orco and the master of the comet are dead—and perhaps others of the Cometeers. The force Bob released was evidently very great."

"And Bob's blessed mother," the old man pursued, "will be safe, now?"

"If she was uninjured, Giles, I think so. Safe—and free to use AKKA to defend herself and the system. For Stephen Orco won't be using his knowledge against her any longer."

"Ah, so," wheezed Giles Habibula, happily. The scarred yellow moon of his face was beaming. He wiped the tears out of his small eyes with the back of his hand, and blew his nose again. His sickness, for the moment, was forgotten.

"If Aladoree is saved, nothing else matters so mortal much!"

Jay Kalam nodded, gravely smiling. His dark eyes were fixed again, speculatively, upon the little cube which was still crusted with gleaming frost.

"Where did you find it, Giles?" he asked. "We thought the box was empty."

"Ah, so," wheezed the old man. "It was empty."

He brushed his fat hands together happily.

"The mortal box was empty," he repeated. "But old Giles has the knack of getting at locked and hidden things. Surely you must at last admit his precious genius, Jay, when it has saved the blessed system?"

"Of course, Giles," said the com-

mander, with smiling admiration. "How did you find it?"

The dull round eyes looked down again at the empty box of scarlet metal, at the curious designs upon its sides, in argent and jet.

"The purpose of that pattern intrigued me," said Giles Habibula, "for the makers of the mortal safe did not indulge in useless ornamentation. And it led my fingers to a hidden lock. The rods are set flush with the surface—they form the black circles in the design."

"My poor old fingers found the lock, just as the monsters came into the room. So I gave you the signal, Jay, and then set out to master the lock while you diverted the attention of the fearful creatures."

"Ah, me!" he sighed, "the genius of old Giles Habibula will never again endure such a desperate trial. His poor old heart would fail. Ah, Jay, death was mortal near when I solved the riddle of the lock."

"And then, of a sudden, the blessed cube was lying in the bottom of the box. Life knows where it had been!" His small eyes peered up intently as he asked, "What would you think, Jay?"

Reflectively, the commander was rubbing at the dried blood on his chin.

"Outside of our space, it may have been," he said slowly. "That wouldn't be impossible to the science of the Cometeers. It must have been that! The cube was concealed in extra-dimensional space, held, no doubt, by fields of force that drew it back when the secret lock was worked."

His dark eyes fell thoughtfully to the little cube again.

"It seems very stupid of them," Bob Star put in, "to have delayed so long to kill us, when we were so near the secret of——"

The commander shook his head.

"I think I have it," he said. "I think the Cometeers were not quite frank with Stephen Orco. They let him believe that

his new body was wholly invulnerable. They kept the secret of this weapon as an advantage to counterbalance his knowledge of AKKA.

"Remember, he referred to this place as the 'chamber of generation.' He must have been deceived as to the nature of its secret.

"Stephen Orco, then, must have been quite confident of his own immortality, and free of any fear until the end.

"His companion, the lord of the comet, was quite obviously apprehensive, and impatient to be done with us. But he was unable to take any very precipitate action without danger of rousing the suspicions of Stephen Orco.

"It was that curious situation that gave us the time——"

JAY KALAM was interrupted by a bulky missile that came plunging down the square well of the entrance, and thudded noisily against the green metal wall opposite.

It gasped for breath, straightened, and became the body of Hal Samdu. It was still marked with battle, and patched with reddened bandages. But the rugged face bore an eager smile, and the blue, clear eyes were shining joyously.

"Aye, Bob," he rumbled, "I told your mother I should find you in here."

"My mother?" echoed Bob Star, husky with gladness. "Then—then she is——"

"Aye!" said the giant. "She is waiting on the ship, outside. And your father, too. The strange slaves of the Cometeers are about them. But you needn't mind them, for they are friends, since the damned *aythrin* are gone——"

Gravely eager, Jay Kalam's voice cut in: "The *aythrin* are gone? All of of them?"

Hal Samdu nodded his shaggy head.

"Aye," he rumbled. "So John Star has learned from the slaves. The power you set free in here destroyed them all, to the limits of the comet."

"I had hoped so," said Jay Kalam.

And his dark, joyous eyes fell again to the little black cube, from which the frost was beginning to melt.

Hal Samdu's big hand grasped Bob Star's shoulder.

"Come, Bob," he said, "to your mother."

John Star was waiting at the entrance, to help them to the deck of the ship. His small, hard body was trim and soldierly as ever, in the green of the legion. His bronzed face was smiling with pleasure.

Bob Star was secretly amazed when his father embraced him, and he felt the wetness of a tear on that tanned cheek. A lump came up in his own throat when his father called him, for the first time in many years, not "Robert," but "Bob."

Then he was on the red, smooth metal of the railed deck. Above was the twilight of the hollow world, still silently throbbing with the power of those unimaginable machines, whose builders were gone. Far back, beyond the dome in the center of the deck, were ranked a score of the strange slaves of the Cometeers, white globes, slender green cones, lank, many-limbed red giants.

The slaves were silent. Bob Star sensed their awe of these few insignificant bipeds, who had so amazingly vanquished their dread lords.

HIS MOTHER was waiting. She came to meet him, walking with the same slender grace. Even in this dusk, the old magic lights were playing through her brown hair. And her cool gray eyes were luminous with joy.

Rejoicing to the comforting feel of weight and balance, that banished the last threat of sickness, Bob Star ran to take her in his arms. She kissed him and laughed, blinking the tears out of her eyes.

"My son!" she gasped, happily.

"Bob! You've grown a frightful beard!"

She embraced Jay Kalam and Giles Habibula, who long ago had been her guards.

Then Bob Star presented Kay Nymidee, with his arm around her, saying: "Mother, here is a stranger. She is alone; her parents and all her people were murdered by the Cometeers. She doesn't speak much English—yet. I want to make her welcome, mother. For it was she who guided us to victory; and because—because I love her!"

Through a painful constriction in his throat, he choked out the name: "Kay—Kay Nymidee."

"Hal told me," his mother said.

Mistily, he saw his mother smile, and clasp the shy and diffident girl in her arms.

"Kay," he heard her murmur, "darling—my brave little darling——"

And Kay Nymidee whispered something, softly, in her own strange language, and laughed a little, shakily, with a weary, happy relief.

Smiling gently, his mother took his hand, and Kay's, and put them together.

"I'm glad, Bob," she whispered. "Glad——"

Bob Star tried to say something, but the queer little ache in his throat wouldn't let him speak. He was beginning to feel tired. A singular peace had been stealing into him, since the old pain was dead. For the first time in nine years, he wanted to rest. He was sleepy.

"Kay will go back with us to the Purple Hall," he heard the cool magic of his mother's voice. And suddenly he was yearning poignantly for the music

of Kay Nymidee's laughter, in the peaceful beauty of the gardens of Phobos.

"This ship will take us there," his mother was saying, "in two days, John says. These queer beings seem eager to obey."

"When we are rested"—his own voice was murmuring—"when we are rested, I'm going to learn Spanish, and teach Kay English——"

The girl stirred in his arms; slowly, softly, she whispered, "Yes—darling, yes——"

His father's crisp voice, then, cut through his fatigue: "—then, commander, what is to be done about the comet?"

"There are, I think, three possible alternatives," he heard Jay Kalam's deliberate reply, "and the choice among them must be left to the council. The entire comet may be destroyed with AKKA—that would be completely irrational. Or it may be kept as a permanent part of the system. Or the liberated races of the comet, if they are capable and desirous of doing so, may be permitted to depart in it.

"I should vote for the last alternative.

"At any rate"—and enthusiasm glowed within the grave tones—"the comet offers us a magnificent accession of new knowledge. I am going to return immediately with an expedition of experts in every branch of learning. A stupendous opportunity——"

Bob Star was very tired, and Kay Nymidee's arm felt warm against him.

Faintly, as from a vast distance, he heard Giles Habibula's plaintive voice: "Come, Hal, and let us see if there are any proper human victuals upon the precious ship!"

THE END

*Don't forget, Donald Wandrei returns to Astounding
with a great story, next month.*

Blazing New Trails

Donald Wandrei is coming back to us next month with a great story, so pass the word along. Remember, he wrote "Colossus." Those who miss next month's issue will regret it. So far, the schedule includes John Russell Fearn, Raymond Z. Gallun, Warner Van Lorne, Murray Leinster, J. W. Campbell, Jr., and Neil R. Jones.

That sounds like a catalogue of favorites, but did you notice the collection of authors who contributed to this issue? Leinster, West, Schachner, Gallun, A. R. Long, Weinbaum, Farley, J. W. Campbell, Jr., and Williamson. It is a significant list. Every one of them contributes something to the whole. Weinbaum will not appear again.

Another promising science-fiction writer has left us. David R. Daniels has taken "The Far Way." He was killed accidentally, by gunshot, some weeks ago. We will miss him, and remember him.

I have been pleased to see serious discussions of scientific data creeping into Brass Tacks. I hope these discussions can remain clean-cut debates. We must remember that science textbooks are simply the recorded observations of fact. If errata creep in they simply leave the way open to new discoveries bearing upon a point—and pave the way for added observations to be recorded.

Science represents the work of civilized man for several thousand years, groping, struggling, classifying, recording, tossing the notes so that a new generation can carry on.

Astounding Stories holds a unique and important place in scientific achievement. Man's dreams always lead him toward new efforts. Jules Verne dreamed of submarines and rocket ships. We have the submarines. Simon & Schuster have just released a book entitled "Rockets Through Space, the Dawn of Interplanetary Travel," by P. E. Cleator. This book deals with the actual experimentation accomplished by the American Rocket Society, and others. It points out that a trip to the moon is actually possible to-day!

Perhaps we dream—but we do so logically, and science follows in the footsteps of our dreams.

And we need to extend our circle. Keep the thought that you must help me do it. Will you?

The Editor.

Let's Get Down to BRASS TACKS



AN OPEN FORUM of CONTROVERSIAL OPINION

Daniels Will Be Missed.

My dear Mr. Tremaine:

I wonder if you have heard the sorrowful news of the death of one of your most promising authors—David R. Daniels? He passed away on April 17th at Ignacio, Colorado, where he resided. I had never met him, but I felt that I knew him personally because of a long correspondence. I was apprised of the sad news in a letter from his mother.

Although he was only twenty-one years old at the time of his death, Daniels had attained considerable skill as a writer and had sold six science-fiction stories, of which five were published in *Astounding Stories*. They were: *Stars*, *Into the Depths*, *The Far Way*, *The Way of the Earth* and *Death Cloud*. I feel sure that had he lived he would have achieved lasting fame.

I know that you and your readers will long remember Daniels and will regard his death as a personal loss.—Kenneth Sterling, New York, New York.

Page Stanton Coblenz!

Dear Editor:

I am writing to compliment you on the superb issue of *Astounding* which I have just finished reading. I've probably never read a better issue in any magazine. To take the stories up in detail:

Reverse Universe: Schachner is one of my favorite authors, and this represents his work exceedingly well. 'Twas excellent. However, it seems to need a little more description or explanation of the "reverse universe" in sequel or something.

The Glowworm Flower: Coblenz swell, as usual. But, one little point. It seems that I've read, somewhere, that an object must attain a speed of about seven miles per second in order to leave Earth's atmosphere. However, for the round trip to the Moon, of 600,000 miles, 45 hours were said to have been taken. Dividing, this gives an approximate speed of 12,500 m. p. h., or 3.5 m. p. sec., which is one half the required speed. Your physics, Stanton?

The Cometeers: Continues fairly good. Needs a little stepping up, though.

Ecce Homo: However, while the masters

were so calmly switching around the genes and chromosomes of the attendants, why couldn't they, just as easily, remove those of the emotions, like love?

At the Center of Gravity: Very good.

Glacula: Ditto.

Accuracy: Something tells me this is going to be a lot better than *Lo!* And by Campbell—Well!

Origin of Thought: Rather mediocre. Nice, though, that wishing power of Jerry's!

The Shadow out of Time: Absolutely magnificent! I am at a loss for words. 'Twas one of the best tales I ever read. As much an improvement over *At the Mountains of Madness* as the auto over the horse. It started with a lot of description that I didn't like at all, but the middle and end were superb. Part of it actually sent chills up my spine, which a story seldom does. This makes Lovecraft practically supreme, in my opinion.

Again, I wish to congratulate you, Mr. Editor, for this swell issue and for all the good authors you got for it. Here's hoping there are a lot more like it!—Cameron D. Lewis, 268 Shephard Avenue, Kenmore, New York.

Piqued at Lovecraft.

Dear Editor:

It's spring up here in the North, but there is cold winter in my heart because I have at least two bricks to throw at *Astounding*. I am a good-natured fellow, I hear, but I get mad when I read such trash as *At the Mountains of Madness*.

That was bad enough; but when I began to read *The Shadow out of Time* I was so darned mad that I was tempted to leave the story unfinished. However, I got through it somehow. I couldn't make sense out of either of Lovecraft's stories. So, please, for the love of me, cut out such stories in the future.

But on the whole, the magazine is the best that I have ever read, and I was reading long before you even took over the duties as editor. I've never missed an issue yet.

Before I sign off, I wish to add my voice to a plea for more Hawk Carse and Red Mask of the Badlands stories, also a sequel to *The Skylark*

of *Valeron*, the finest science-fiction story I've ever read.—Peter Ruzella, Jr., 23 Woodlawn Avenue, Massena, New York.

Lovecraft Again.

My dear Mr. Tremaine:

Another letter from one of those science-fiction readers who has been reading that type of story over a period of years, but who has never written in. Yes, I'm only eighteen years old, but I've been reading science-fiction since *The Stone From the Green Star*. I really don't know how long ago that was, but I was in grammar school at the time and I'm in my first year at Columbia now.

I've just finished the June issue of "our" magazine and was duly impressed—perhaps not very favorably with *The Shadow out of Time*. I don't claim to be an authority on the subject, but this type of story seems to me to belong in a fantastic magazine along with *The Chrysalis*. I think Mr. Robert Thompson was a little off when commending the latter story as a marvelous piece of work.

I also think that Cleveland Soper, Jr., has the right slant on *At the Mountains of Madness*. In my opinion, it was drivel. Lovecraft is out of place in *Astounding*. In fact, it took me over two days to read his story, *The Shadow out of Time*. The word "horrible" began to pall on me. "Hideous" was another word of great repetition. I don't like to pan people but I think I'm justified in this case.

Binder's *Spawn of Eternal Thought* was a pretty well-made story. My interest never lagged for a moment. I suppose that my interest will always be aroused by good interplanetary stories. The "thing" of the story was a little far-fetched, but it didn't spoil the tale any.

The Cometeers promises to be a pretty swell story. The action is just getting under way in this second installment. Too bad it has to run for four months—seems to me an awfully long time. However, I guess we old readers are used to waiting by now.

May I add my plea for a quarterly—also my congratulations on the edges and covers?—Andy Aprea, Jr., 310 East Forty-fourth Street, New York City, New York.

And Again—but Favorable.

Dear Editor:

Say, what's the matter with your readers' literary tastes, anyhow? Lovecraft's *At the Mountains of Madness* is perhaps the best-written story ever to find its way into *Astounding's* pages, yet I notice that a great number of fans have violently slammed it in your last two or three issues.

I can understand some fans' aversions to it, since it is more of the weird type of story than the truly scientific; but when it is condemned as being poorly written—well, all I can say is that these are the so-called fans, the type that revel in the stories written in the Van Lorne disconnected style, who have pulled science-fiction and its followers way down in the estimation of prominent literary critics.

I've just purchased the June issue and haven't had time to read any of the stories as yet; from appearances I would say that this issue bids fair to excel even the popular April number, which I consider your best so far.—Corwin Stickney, Jr., 28 Dawson Street, Belleville, New Jersey.

We Want To Be Checked Up.

Dear Mr. Tremaine:

I do not think I can be classed as one of those who does not appreciate the progress made by *Astounding* in the past two and a half years. I may still find fault and ask for this and that, but I am well aware of the improved quality of

the new *Astounding*. It is much in evidence in the May issue.

The Cometeers, by Jack Williamson, I am sure is going to surpass *The Legion of Space*. At least it starts off that way. Williamson doesn't write often enough to suit me, although that may be the reason for his popularity and the high quality of what he does turn out.

Mathematica Plus was bewildering, but all the more enjoyable. Some don't like Fearn; I don't understand why.

I can't say so much for *Doomed by the Planetoid*. Sharp has done better. *Spawn of Eternal Thought* is the best thing done by Binder since *Enslaved Brains*. *Elimination* is the best of the shorts. I hope *The W62's Last Flight* concludes that series, which should never have appeared in the new *Astounding*.

Who illustrated *Red Storm on Jupiter, Elimination*, and *The Weapon*? Saaty did the first good illustration in his science-fiction career in the May issue. Brown's cover work just isn't what it used to be. What about Lawrence Manning?—Jack Darrow, 3847 North Francisco Avenue, Chicago, Illinois.

Well, I Read It!

Dear Mr. Tremaine:

I have just finished reading *Astounding Stories* for June. Wow! What a surprise! You could have knocked me over with a grain of basalt. At first I did not know whether or not it was one of Fu Manchu's creations or dear old *Astounding*.

Wait, don't tear this letter up; the good part is coming now. Why not give us a sequel to *Strange City, Entropy*, and best of all *Glugla* in this issue?

The Center of Gravity—not so hot. I'm fed up with Lovecraft and this is the worst yet. I think *The Shadow out of Time* is the height of the ridiculous. I was disgusted and horror-stricken with that page of hideous monsters.

You know, we are still waiting for a quarterly. When do we get it, or do we?—James Ladd, 2709 Hershell Street, Jacksonville, Florida.

One for Writers to Read.

Dear Editor:

You say that you want opinions. All right, I'll dissect the June issue—and tell you just what I think of it.

The Shadow out of Time: I don't know whether I liked it or not. Lovecraft's stories are too tedious, too monotonous to suit me. I finish one of his works with the feeling of having wasted my time. Still, on the other hand, there is something about them that "gets me." Memories of the "Old Ones" and the "Great Race" shall linger with me for a long time.

If Lovecraft could only create real characters and action to go with his superb, but lifeless fantasy, he would put out some classics. But things being as is, don't give us Lovecraft too often, editor; we shall tire of him quickly.

Judging by *Reverse Universe*, Nat Schachner's imagination is much superior to his understanding of natural mechanics; a pretty poor story.

Glugla was almost excellent. "Almost" because there were two mysteries left unexplained. Why couldn't Jim Weatherall "change his address?" Why did some one have to "remain in his house, some one who knew?" Why did *Glugla* leave his ship? If exploration was his motive, why didn't he go back to his ship when he found the cold unbearable?

I really enjoyed the story but was disappointed by the sense of unreality induced by the above-mentioned errors. I believe that if Van Lorne realizes how much such slight errors detract from the value of the story, he will not be so careless in the future.

I just can't appreciate fairy tales like *The Glowworm Flower*. *Eccle Homo* presented some interesting psychology. At the *Center of Gravity* was rather pointless. I've seen worse, though.

Origin of Thought was considerably better—good dialogue. Rather poor plot, though.

My deepest appreciation for *Accuracy*—"fascinating" is the word, editor. The science feature was easily the best part of the issue, with the possible exception of *The Cometeers* which I haven't read yet.

I guess I'm pretty hard to please. But don't give up, editor. I'm still with you in spite of the innumerable faults. I'd like more humor. How about a nutty one once in a while—something like *The Fourth-Dimensional Demonstrator*? Also, how about another by Taine?—O. M. Davidson, Jr., Box 24, Ged, Louisiana.

In General.

Dear Editor:

I have been reading *Astounding* now for about two years. I used to read all the other science-fiction magazines, but I have laid them all aside and now read only *Astounding*.

I think the April issue is one of the best I have ever read. I thought *Spawn of Eternal Thought* started fairly well. *Child of the Stars* was, in my opinion, the best story in the issue. *The Chrysalis* was the only story not above average. I didn't think it belonged in a science-fiction magazine.

White Adventure was swell, but there was no explanation of why the snow came. *The Cosmo Trap* was a good yarn and needs a sequel. *Outlays on Callisto* was second best in the issue.

The May issue was not up to par. I just couldn't seem to push through *Red Storm on Jupiter*; it didn't appeal to me. *Doomed by the Planetoid* was good; I thought it the second best in the issue, with the final part of *Spawn of Eternal Thought* best. That story sure did end swell. I liked *Elimination*, *The Weapon*, and *The W62's Last Flight* equally well.

I have just completed the June issue, and think it equal to the April issue. *At the Center of Gravity* was the only one I did not like. The two best ones in the issue were *Glagula* and *Reverse Universe*. *The Glowworm Flower* seemed too much like a fairy tale, although I did enjoy it. *Accuracy* and that group are going to be very interesting.

Now a little about the artists: I think Marchioni is by far the best illustrator. If Marchioni stopped illustrating some of the stories, I would curl up and die. I don't see why every one is so crazy about Doid. He is a good artist, but I think Marchioni is far better. He is much better on interior scenes than on outdoor ones. I like Schneeman, but don't care much for the new artist Elatos.

I hope the magazine keeps getting better all the time; but, on second thought, that would be almost impossible as it is just about perfect now except for one thing: why don't you put a comment at the end of each letter?

I think the idea of putting *Astounding* on the radio is good; it would get a lot more readers. I am fourteen years old and will keep on reading *Astounding* until I am 114, unless I die before that time.—Jack Horner, North Market Street, Elizabethtown, Pennsylvania.

Wesso Is Back Again.

Dear Mr. Tremaine:

After waiting a whole month for the June issue, I find that you still don't give Mr. Wesso any pictures to draw. Why? I like to see new artists work, but I like Wesso better than any one, even Paul, and I miss him after that excellent drawing for *Outlays on Callisto*. If you don't give him a picture next month, I'll write you another letter and another and another until you let him paint a cover.

I think that sometimes a picture is more important than a story. Poor pictures have spoiled a story more than once for me. I do not like Brown's work, especially his interior illustrations. That's why I didn't read *The Legion of Space*; but after I'd read the first page of its sequel, I went back and read the whole thing.

If I'd read it when I first got the magazine, I certainly wouldn't have enjoyed it.

That brings me to the point of my letter. If you'll look at any issue of 1932, you will find that readers said the stories were rotten, bunk, etc.—and now they want stories like that.

I have an idea which ought to help readers out in getting this type of story. Just buy the latest issue of your favorite magazine, stuff it into a safe, bury the safe in a lonely spot, and then make a map telling where the treasure is buried. Be sure you make the map very difficult to solve by using your own self-invented code—and throw away the code key. By the time you have worked out the code again and found the treasure, three or four years will have elapsed and the magazine will be from "the good old days."

However, as most science-fiction fans haven't much money, maybe it would be better if you just bought the magazine a few years late.

Here's still another idea for readers who don't have time enough to read the whole magazine every month: They can buy every issue, and find out in Brass Tacks which are the best stories. Thus they will be able to read the best stories in just a little time.—Morris S. Dolleas, 126—12th Avenue, North Saint Paul, Minnesota.

Sequels Again.

Dear Editor:

I have just graduated from high school, and as a celebration I'm going to write a letter to you. Do you know what is second best to graduating? Guess again. *Astounding* is so close I might as well call it second.

I have noticed several times in Brass Tacks that many readers write very long letters. If I wrote a letter any longer than I have the two previous times, I couldn't write but about once a year. You see, I am such a slow thinker that it takes about two months to think up what to write.

I have before me the three issues—April, May and June. As I look at the covers I am particularly struck by the cover painting by Brown. Never have I seen such pictures on *Astounding*. They are extraordinary, stupendous and even good.

I would like to know where Mr. Soper, Jr., gets the idea that the April issue is far below par. Perhaps to him *At the Mountains of Madness* was a little unreasonable, but to me the magazine as a whole was very, very good.

I especially liked *Spawn of Eternal Thought*. It is my kind of story. Above all, I like stories of space travel. For the moment that seems to me more reasonable than the thought of finding lost civilizations which surpassed the present trend of life. The April issue was very good. I wish I could get a picture of the cover without printing on it.

I consider myself the possessor of a good imagination, but for the life of me I can't figure out what the cover of the May issue stands for. Where are they—the figures in the picture—and what are they standing on? Maybe you can enlighten me.

Mathematica Plus was very good. If the rest of *The Cometeers* is as good as the beginning, it's going to be swell. As for the other stories, I can't say much except that they are rather good on the average. I liked the June issue very much. *Glagula* was very good and needs a sequel. Another that needs a sequel is *Reverse Universe*. I am looking forward to the science features by John W. Campbell, Jr. *Strange City* needs a sequel, too.

If any one reading this should care to drop me a line it will be appreciated and answered with more lines from me very promptly.—Calvin Fine, Box 441, Kilgore, Texas.

Another "First" Letter.

Dear Editor:

Astounding Stories has been my constant companion for the last two years, but to-day is

the first time I have ever considered dropping you a line to tell you what I think of the magazine.

About the cover: Mr. Brown does not come up to my expectations in this issue, as he did in the last. I have seen a number of very gaudy covers put out by Astounding, but the April edition had perhaps the best cover that I have seen for a long time.

The stories in the June issue, on the whole, were very good. Of course, there is always a story or two that does not live up to expectations. Mr. Lovcraft's story, *The Shadow out of Time*, is unusual reading and interesting, but there seems to be a series of total blanks drawn after you have laid down the magazine and attempted to think the thing out to your own satisfaction.

A very good story of last month—May—was *Spacen of Eternal Thought*. The story was so intriguing that it leaves me unsatisfied. How about a sequel to this unusual story?

Accuracy was a fine article. I would like to see many more of these fine articles. They are conducive to considerable thought.

Congratulations on the trimmed edges. You wouldn't know the old magazine. Best of luck under the Street & Smith banner.—Thane Weisberg, 1528 West Indiana Street, Spokane, Washington.

A General Discussion.

Dear Editor:

Reverse Universe, by Nat Schachner, was the best story in the June issue, because it was entirely logical and realistic. A sequel telling what adventures the space travelers met up with when they reached their objective would be welcome.

W. Van Lorne's *Glaga* had some weak points that spoiled it. It doesn't seem logical that a being so intelligent as to conquer space would know nothing about fire or frost. Also, no space voyager in his right mind would step out onto a strange planet without testing the air, temperature, etc., and clothe himself to meet the existing conditions. No tale having defects like these can seem possible. And if a story lacks the realistic touch, what good is it?

Lovcraft's *The Shadow out of Time* was very disappointing. Like his *At the Mountains of Madness*, the yarn was all description and little else. Lovcraft is a master when it comes to describing things—there's no doubt about that. But a story has to have more than just description to click.

Williamson's *The Cometeers* seems to be good. None of the shorts were very outstanding. Brown's cover was so good that I believe he has equaled Paul. This is quite an achievement, since Paul is the best all-round illustrator in the science-fiction field. Brown's interior drawings seem to get better with each issue.

Schneeman has improved his work very much. If he keeps it up, he will rival Wesso. Where is Wesso anyway? You ought to have him permanently on the job, because only Paul can surpass him in inside drawings. There were fifteen pictures in the issue—no other science-fiction magazine has ever had so many.

Astounding may not be perfect, but it certainly is the best of its kind.—Charles Pizzano, 11 Winthrop Street, Dedham, Massachusetts.

The Quarterly Again!

Dear Editor:

The Shadow out of Time is the best story in the issue. It is much better than Lovcraft's other novel, *At the Mountains of Madness*. Maybe it is because it is shorter. Yes, I guess that's what it is.

Brown's cover is much better than his usual drawings; however, Wessowski could do much better. Why not put him on the cover? Which reminds me, where has Wesso been keeping himself? Think of it—there wasn't a drawing by him for two issues.

The only thing I found fault with in this issue

was the article by Campbell. The stories, while not all having new plots, are good reading.

In answer to some of the readers:

Torrance: I disagree with you on your view of Marchion. What's wrong with his figures? Sometimes I often wonder why he isn't tried on the cover.

Cleveland C. Soper, Jr.: I agree with you completely.

Calvin Fine: I would also like to see Hawk Carse back in the pages of Astounding Stories.

Why not revive *Strange Tales*? In reading some of the back issues I noticed that I enjoyed them very much. Why, with Street & Smith behind it, *Strange Tales* would be sure to go places.

Another plea: what about a quarterly?—John V. Baltadonis, 1700 Frankford Avenue, Philadelphia, Pennsylvania.

After a Year.

Dear Mr. Tremaine:

Thank you for answering all my questions. It took a lot of fog off my mind.

So we are not going to have a quarterly. Well, maybe it's for the best.

Your June issue is a top-notch—not a bad story. *The Shadow out of Time* is very good. *Glaga* is one of the greatest stories I have read so far. If you keep your magazine the way it is, you certainly will not have to worry whether it will sell or not.

Now for a few bricks: The June cover was good, but we want Wesso. Please take out M. Marchion—he has fallen down and is now worse than Brown, who is bad enough.

With this issue I complete one year of reading Astounding Stories. But in that year I have obtained all the back issues of Astounding.—James Taurasi, 137-07 32nd Avenue, Flushing, Long Island.

Science-fiction and Fantasy.

Dear Editor:

I have meant to write you ever since the end of *At the Mountains of Madness* which was too poor for further comment. In the latest issue, I thought that *Reverse Universe*, although a good story, was too fantastic for a magazine that calls itself science-fiction. I wish that more readers would express themselves in Brass Tacks on this kind of fantasy.

The Shadow out of Time was good, but I think Lovcraft dwells too much on fear and horror. The space ship on the issue containing the first installment of *Spacen of Eternal Thought* was by far the best one on the cover of any magazine in the past few years. As for that story: I think it is the best I have ever read in a science-fiction magazine. It was one of the few that have had good, plausible plots.

Mathematica and its sequel were not so hot, in spite of the fact that they contained some of the present-day theories. I liked the first scientific article by John W. Campbell, Jr., but I hope that they won't take the place of a story. *The Cometeers* seems to be pretty good, but I think that four installments is too many. In this issue I would certainly give four stars to *Glaga*! For my opinion of *At the Mountains of Madness* just reread the first part of the letter in the June Brass Tacks from Cleveland Soper. The short stories are usually good. Would it be possible to publish Astounding Stories as often as three times every two months?

Please have editorial comments in Brass Tacks.—Richard Rhein, Evanston, Illinois.

Science-fiction Doesn't Have to be Scientific.

Dear Editor:

I snatch time from an early lunch to begin a letter of loud damn and faint praise—the damn

being for your reading audience in general, the praise for H. P. Lovecraft for being a craftsman and an artist, quite regardless of whether or not he is a scientist. I can't understand the more or less general condemnation of his stories. Is it that they are not scientific? Neither are a good half of the stories printed in the last three issues.

Van Lorne and Fearn write what should be known as pseudo-pseudo science-fiction—an empty affair consisting of a well-tried plot, a little mystery—in Van Lorne at least—and a goodly number of odd-looking devices with long, scientific names put into the tale to fool the readers into thinking that they are absorbing science-fiction. Mr. Lincoln must have been referring to science-fiction when he said, "you can fool some of the people all the time."

Lovecraft refuses to add the usual space ships and disintegrators to his tales; therefore, he does not write science-fiction. All right, he doesn't! But his stuff is worth admitting to the magazine on literary merit alone.

You have only three or four authors who could qualify as authors *only*, not merely as authors of science-fiction, and Lovecraft is one of them. His stories stand rereading better than almost any others you have printed.

Lovecraft does much the same thing in his stories that Tschalkowsky does in his music—his climaxes are obvious, yet you always get a kick out of them. In my own case, at least, his description is so convincing that I wonder: Is this man chiseling his stories out of fresh, uncut granite, or is he merely knocking away the detritus of some age-old carving? His lore has all the somber ring of truth. You get the general idea. I like Lovecraft.

While I'm at it, a good word for another man who has been footballed around by a good slice of your letter-writing readers. Marchioni is the next best artist to Elliott Dold, who is the best in science-fiction. And was I glad to see him back in this issue! A careful comparison will show that there is more detail in his pictures than in any others except Dold's. Of course, Wesso at his best, is as good as either one, perhaps better, but it's been years since Wesso was at his best.

Marchioni works with an eye to detail and effect, instead of to effect only. Brown's work has been exceptional in his drawings for the Lovecraft stories. I recognize three of the monsters in his second illustrations for *The Shadow Out of Time*. There is the plant man from *Proxima Centauri*, the star-headed Old One from *At the Mountains of Madness* and *Old Faithful*.

One other good story, and I've said my say: *Elimination* by Don Stuart—an old idea with, at last, a really rational slant. The drive from beginning to end, with the only possible—but horrible—conclusion staring you in the face from almost the first line, is magnificently carried out. Stuart has still to write his first bad story.

I'm sorry to see the inroads of the space-adventure, pirate-thrill writers, and would like more by Lovecraft, Campbell, Williamson, Smith and Taine. How I wish I could add Weinbaum! As long as you print one Stuart story a year, I'll stick by you.—W. B. Hoskins, 65 N. Pleasant Street, Oberlin, Ohio.

Science vs. Accepted Opinions.

Dear Editor:

With the May issue, *Astounding Stories* reaches a new peak of achievement. Despite the cover, which was rather disappointing after the April one, the contents were uniformly good, and I have nothing but praise for Marchioni's illustrations, especially for the new serial.

The Cometeers shows every sign of being Williamson's best effort up to date; his portrayal of his characters is very human.

Don A. Stuart's *Elimination* was well up to his usual high standard. He has a style of which he should be proud—a style which leaves a lasting impression on the reader.

It is unnecessary to go through all the other

stories to say how good they are; but I should like to point out an error which occurs in several stories of late: The authors of such stories as *Red Storm on Jupiter*, *Spawn of Eternal Thought*, *Mad Moon*, *Blue Magic*, etc., build the plot of their stories on, or frequently mention, the erroneous fact that Jupiter and Saturn are planets possessing and radiating considerable amounts of heat. Sometimes they are pictured as bodies similar to Venus, and at other times as acting as miniature suns for their attendant satellites.

It has been found by direct measurement that the temperature of Jupiter is about 200° Fahrenheit below zero, and that it receives one twenty-seventh as much heat from the Sun as does the Earth. Further proof can be found in the fact that two of the constituents of Jupiter's atmosphere are ammonia and methane.

Now the most volatile compounds of hydrogen, with nitrogen and carbon, are ammonia and methane respectively, and therefore it follows that Jupiter cannot be hot, or else these compounds would have been volatilized and unable to exist in their combined form.

Similarly, on Saturn the atmosphere contains methane and ammonia, but more of methane and less of ammonia than Jupiter. This is further proof as Saturn is much farther from the Sun than Jupiter, and therefore proportionately colder. Since ammonia is more easily condensed than methane, the colder atmosphere of Saturn has caused a correspondingly greater condensation of this gas to liquid form than in Jupiter's atmosphere. Here practical observations bear out theoretical deductions.

Another story in which the science was contrary to accepted opinion was *Moon Crystals*, published in the January issue. For instance, it has been conclusively proved by spectroscopic analysis—as in the cases of Jupiter and Saturn—that the carbon-dioxide content of the Venusian atmosphere is many thousands of times that of Earth's. Also, it is rather difficult to visualize any form of plant life, even in combination with animal life, existing without carbon dioxide.

However, let me say that despite the above objections, all the stories were well-written and most enjoyable.

I am glad to see the number of old favorites returning to your pages. Two, whom I am eagerly awaiting, are conspicuous by their absence—Neil R. Jones and S. P. Wright.

I should like to congratulate you on the extraordinarily fine progress you are making with *Astounding Stories*.—J. H. Pfinsohl, 212 Ashby Road, Burton-on-Trent, Staffordshire, England.

You Have to Allow for Appetites.

Dear Editor:

The latest issue—May—is even better than the preceding number. The cover is a masterpiece and the story it illustrates is worthy of it. *The Cometeers* is the best story. I hope the coming installments keep up the high standards set in the first part.

However, I did not like the following three stories: *Mathematica Plus*, *Doomed by the Planetoid*, and *Spawn of Eternal Thought*. *Mathematica Plus* lacked something that the original story had. Fearn went beyond the bounds of plausibility in his story. *Spawn of Eternal Thought* was perfect, except for one fact: Binder told of the "malignant mind eating a whole solar system" too casually. Such an appetite!

You've done a great job with our magazine, editor. Keep it up. All you need now is an editorial reply to the letters.—Sidney Slamick, 199 Callender Street, Dorchester, Massachusetts.

Picking out the Best.

Dear Editor:

Here I am again. I want to thank you very much for having printed my letter in *Brass Tacks*. The past four issues have been swell.

The stories I liked best are: *Strange City* by Warner Van Lorne—that fellow certainly knows how to write; *Mathematica*, a swell tale; *Redemption Cairn* by Weinbaum.

In April, Eando Binder came smashing through with another great yarn. I hope all the parts are as good as the first. Gallun's sequel to *The Son of Old Faithful* is a fine tale. *The Chrysalis* was good, too. Now I await the May issue. I would like to hear from any readers of *Astounding Stories*, male or female.—Tom Kerwin, 141 Philip Street, Albany, New York.

"Mathematica Plus" Unsolvable.

Dear Editor:

Say, you're going up like a rocket ship. The May cover is just about perfect, and the stories are swell, with the exception of *Mathematica Plus*. Maybe I'm dumb, but I couldn't make head or tail out of Fearn's classic. I struggled through it and then wondered what I had read. I'm not an advocate of the blood-and-thunder type—though an occasional one is welcome—but surely you must admit that Fearn went too far in his attempt to put over a *Science-fiction* story. This is the first story I ever read that I did not understand.

A short story is the best in the issue: namely, *Elimination*. It contains just the right amount of science and the adventure angle is not overdone. It's Stuart's best up to date.

One thing that I hate to see is the love angle creeping into science-fiction. It pervades all other types of literature; why can't we keep it out of *Astounding*? I have only known one author who could mix fantasy and love successfully, and Stanley Weinbaum is dead; he has no equal.

Astounding, unlike its rivals, seems to emphasize the fiction rather than the science. You have no science editorial, no science questionnaire, no science questions-and-answer department; but, as long as the space is used for stories, who cares?—G. R. Griffin, 1 Monument Street, Portland, Maine.

Thank You. We'll Keep it up.

Dear Editor:

Good work on the May issue! Keep it up. *Elimination* by Don Stuart was especially fine. *Spawn of Eternal Thought* and *Doomed by the Planetoid* by D. D. Sharp were also among the top-flight stories of the issue.

I'm eagerly awaiting the last installment of *The Cometeers* by Jack Williamson. I don't read serials until I get the whole works. Until then, I wish you every success.—C. Hamilton Bloomer, Jr., 434 Guerrero Street, San Francisco, California.

Critic and Booster.

Dear Editor:

This is the big, bad critic again—for the fourth letter. But don't look around for the wastebasket yet; I'm not going on a rampage this time. I just wanted to tell you that I've turned salesman for *Astounding Stories*. I've already, made seven members of the "aw-ga-way-it's-just-a-pulp-magazine" school of thought change their minds. All seven of them are now snarling and bawling at me for "some of your back copies, please."

And now, Mr. Editor, please let me make one H'l' knock so that I can keep my label of critic. There was so much controversy about Marchioni's work that I decided to look at some of his past drawings and find out what was what.

Here's my opinion of his work: He draws machines and apparatus very nicely, though a trifle too complex. His humans—at least that's what I suppose they are meant to represent—are as stiff as a bridegroom's collar. In good faith,

and with all due modesty, I would suggest that Mr. Marchioni collaborate with some one on illustrations—he doing the background and technicalities, his partner doing the humans; either that or that he change his sharply angular perspective for something more natural.

His men always look like shriveled mummies, because of the hard lines and sunken cheeks. Personally, I like Marchioni's drawings immensely because they illustrate important sequences—but at times they're awfully hard on the eyes.—Jerry Turner, Kohut, Harrison, New York.

Theories and Discussion.

Dear Editor:

I wish to congratulate you on the high level on which you have put *Astounding Stories*. I would like to make the proposition that in case you put a new section in the magazine, you make it a small note or information pertaining to the successes or findings of any of the interplanetary research societies, or in allied fields. It would attract attention from most of the readers because it is spectacular.

I also wish to say something about the false beliefs of H. J. Rosenthal, page 136, May, 1936, issue: In effect, that which has a beginning does not necessarily have to have an end. For instance, you start the numbers $N=3.141592$ and $e=2.71818$; but how about giving the digit in which any of these ends?

Another instance: Take a long strip of paper, loop it, and half twist one of its two ends. Now start a line on one of the sides of the loop thus formed and try and see if you can end it.

As to saying that space is finite, that is a misconception because, due to the accelerational or gravitational effect of the matter that occupies it, space is curved and—as can be seen in any book on the subject—this curvature takes in not only 3 dimensions, but 4, as is only logical. Thus, we could prolong any line that would be perfectly straight to us without being able to end it, because in reality this line will follow the curvature of space which we cannot measure in practice since all our standards are also warped.

So, practically, space is just as infinite as the line on that loop of paper with the half twist. Yet if the Euclidian concepts were able to hold good in these large dimensions, space would evidently be limited as much as the Earth is. Yet we would be wrong to think that there is "something beyond the end of space," for the simple reason that all the ends of space meet, thus making space continuous—as the two planes which originally made that strip of paper, which now has no start or finish.

Hoping that I have not been much of a bore with this conception, I wish for the continued success of *Astounding Stories*.—Arnulfo G. Gutierrez, 6a Hamburgo 126, Mexico, D. F., Mexico.

Readers' Suggestions Promote Progress.

Dear Editor:

This is another first letter from a reader of science-fiction since 1927. I have watched the rise and decline of science-fiction since that date, but *Astounding Stories* has undoubtedly eclipsed the high levels attained. This is due to your progressive policy of acting upon the suggestions of your readers.

With this in view, I venture to offer further suggestions. Your present stories are excellent, the majority of almost-uniform high standard, but I do not think any of them have excelled S. P. Wright's "John Hanson" series, of which Clifton B. Kruse's "Wiljon Kar" series is a poor substitute. Why the reluctance to publish any more Hawk Carse stories?

My chief complaint concerns the illustrations. Poor illustrations can spoil a magazine even when the stories are good. Many readers will disagree, maintaining that the excellence of the story is the chief concern, and that the illustra-

tions don't matter. A good illustration makes a good story. In this respect, you are badly at fault, even though your illustrations are better than those of your competitors.

There are two outstanding science-fiction artists: Wesso and Dold, of whom I rate Wesso slightly higher. Unfortunately, you have not yet given Wesso adequate scope to show his talents. He should have double-page illustrations, like those Dold had for the serials. Any one who has seen Wesso's illustrations for *Skylark Three* will know what I mean.

Dold is very good, and I eagerly await his return. I suggest that when Dold is well, the illustrations be done entirely by him and Wesso, with both sharing the cover work. Then you will, if your present high standard of stories is maintained, have the perfect magazine of science-fiction.—D. C. Pritchard, 81 Farcroft Avenue, Handsworth, Birmingham, England.

Among Those Favored—and Not.

Dear Editor:

This is just a few lines to let you know that I haven't forgotten you although I have not written lately. There is so little I could say which would not be merely a reiteration of what hundreds of others have said much better than I could say it.

March, April and May issues have all been consistently good, without anything especially outstanding from my point of view. Binder, I think, is somewhat overrated. There is a lack of something in his stories which I find difficult to describe. His yarns, while good, do not possess that little extra which makes one sit and dream afterward.

Fearn has improved tremendously in *Mathematica* and *Mathematica Plus*. The writing style is much better and his science is so very ultra that one cannot argue about it.

Blue Infinity was, without doubt, one of the worst science-fiction stories I have ever read in any of the three magazines—and I have copies back for the last ten years—but *Mathematica* might have been written by a different author. If Fearn can beat *Mathematica* by as much again, I will put him in the top class.

I was terribly sorry to hear about Weinbaum's death. I will miss his stories very much, as he was one of the five authors whose stories I could reread at any time and be sure of recapturing the same thrill as when I read them the first time. The other four are: E. E. Smith, Campbell, Jr., Don A. Stuart, and Murray Leinster. Gallun, Long, Jr., Schachner, and Van Lorne are almost in this category—but not quite. I have just finished reading Gallun's *Old Faithful* series and that little gem of his, *Derelect*. Why have we not yet had a sequel to that one?

Stuart's *Twilight and Night* and his "Machine" series will be hard to beat. Kruse's stories are all good, but you have never yet equaled the old "Commander Hanson" series in this type of yarn. Diffin's serial rather disappointed me. He can do better than that, although *Blue Magic* was quite good. It merely suffered in comparison with some of his other stories.

Williamson, Wandrei, and Corbett are consistently good. Haggard and Sharp I do not care for at all. Coblenz is much overrated, and I usually find his stories difficult to read.

Well, good luck until the next time. You are still easily heading the field in this type of fiction.—Dr. W. A. Gibson, Rowanbank, Bathgate, West Lothian, Scotland.

Continuing a Discussion.

My dear Mr. Tremaine:

Concerning Mr. Robert Lee Hanna's letter in the April issue of your magazine I wish to disagree—in quite a friendly fashion—with him.

He remarked that when he said, "Newton inferred that for every reaction, there was an action that caused it; he did not infer that every action was balanced by a reaction, and this inference cannot be predicated," on an examination paper, it was marked wrong. It was marked correctly; it is wrong.

Mr. Hanna attempts to say that action and reaction are opposite but not equal. He is apparently not familiar with Newton's third law of motion, "action and reaction are equal and opposite."

The action and reaction referred to mean force and counterforce. The meaning of the statement is that force on any one body is exerted by some other body, and this other body itself experiences an equal and opposite force exerted by the first body, the line of action of both forces being the line joining the two bodies.

In many cases the truth of this law is not self-evident. When one presses his two hands together, it will be admitted that the hands, if at rest, press equally in opposite directions. But the case isn't as clear when one hand is pressed against a movable object.

It is often asked, "How can there be motion if the forces are equal and opposite?" The two forces spoken of do not act on one body; one force is exerted by the hand on the obstacle, and the obstacle yields unless restrained by some other force. The reaction is the back pressure of the body on the hand, not a force acting on the body.

Since a force is always accompanied by a counterforce, the two constitute what is known as a stress. This is my opinion. If I have erred, I welcome correction.—Evans C. Thornton, Los Angeles, California.

Curiosity Is Aroused.

Our Astounding Editor:

Thanks for including my first letter in *Brass Tacks*. I said I'd write again. Here I am. I'm like a pup—you know, humor me and I'll stick to you like glue.

Lovecraft's *At the Mountains of Madness* is a humdinger; I think it deserves a sequel. I'd like to know about the delightfully horrible things "over in them thar hills." Also, another expedition could destroy the monster and discover some of the wonderful lost race still existing.

My request was granted. Amen! I said I'd like to see a sequel to *Mathematica*, and what do I see in the May issue but *Mathematica Plus*! Now all we need to round out the bill is a *Mathematica Minus*. I sure enjoyed this yarn, though. More power to your right arm, Mr. Fearn.

Spawns of Eternal Thought was another wham-dingerhoozle of a space-lifting yarn. Eando Binder has what it takes to write such yarns. *The Cometars* sure starts off well.

I agree with H. V. Rosenthal. Editorial notes in *Brass Tacks* would be nice, but they'd take up a lot of space that could be devoted to more letters and another short story.

Seymour Dickman wants a companion magazine. Two magazines are twice as hard to make a good job of than one. Which would you rather have—one magazine well done or two magazines half done? Think it over.

Darrow is hollering for Paul again. I don't know what is so very wonderful about Paul as an artist. His people all have a very distracting sameness. He's good on drawings and machines and such though. Mr. Tremaine, why not try your artists out on a composite drawing? Have the fellow who illustrated *The Cometars* draw the machines, have the artist who illustrated *Elimination* draw the humans. Try one illustration like that and see how it works out.

Now for Brown's covers: April and May are darn good—simple, but very striking, with a nice color scheme. Of the two, I believe April's cover takes the prize.—Leslie A. Crouch, Parry Sound, Ontario, Canada.

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GOLD-CUP WINNER! Geo. Reis won 3 times in a row! He says: "I smoke Camels and enjoy good digestion."



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Camels stimulate digestion... increase alkalinity

The human digestion responds unfavorably to nervousness, hurry, and strain. It is definitely *encouraged* by smoking Camels.

Scientific studies show clearly the manner in which Camels aid digestion. Using sensitive scientific apparatus, it is possible to measure accurately the increase in digestive fluids — alkaline digestive fluids — that follows the enjoyment of Camel's costlier tobaccos.

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